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June 7, 2017

National Energy Board  
Suite 210, 517 – 10<sup>th</sup> Avenue SW  
Calgary, Alberta T2R 0A8

Attention: Ms. Sheri Young  
Secretary of the Board

Dear Ms. Young:

**Re: National Energy Board Incident Management Audit Protocol  
4.2 Investigation and Reporting Incidents and Near Misses – Corrective Action Plan No. 2  
Pouce Coupé Pipe Line Ltd. and Pembina Energy Services Inc. (collectively “Pembina”)  
NEB File No.: OF-Surv-OpAud-P749-2016-2017 01**

As per the direction from the National Energy Board (“NEB”) letter dated May 18, 2017 Pembina submits the attached Corrective Action Plan No. 2 in relation to the NEB’s Final Audit Report which focused on sub-element 4.2 *Investigation and Reporting Incidents and Near Misses*.

Pembina looks forward to continued conversations with the NEB with respect to the attached. Communication related to this matter may be directed [REDACTED] at [REDACTED] or by email at [REDACTED].

Sincerely,

[REDACTED]

[REDACTED]  
Senior Manager – Safety, Security & Emergency Response

Planning Enclosure

cc: Darryl Pederson – Lead Auditor, National Energy Board

**National Energy Board Incident Management Audit Protocol  
4.2 Investigation and Reporting Incidents and Near Misses  
Pouce Coupé Pipe Line Ltd. and Pembina Energy Services Inc.**

**Corrective Action Plan No. 2  
File OF-Surv-OpAud-P749-2016-2017 01**

**Introduction**

On March 14, 2017, the National Energy Board (“NEB”) provided its Final Audit Report (the “Report”) which focused on sub-element 4.2 *Investigation and Reporting Incidents and Near Misses* (the “Audit”) of the NEB Management System and Protection Program Audit Protocol. The Audit was conducted on two of Pembina Pipeline Corporation’s subsidiaries – Pembina Energy Services Inc. and Pouce Coupé Pipe Line Ltd.<sup>1</sup> (collectively “Pembina”). Within the Report, the NEB directed Pembina to provide a Corrective Action Plan (“CAP”) within thirty days of receiving the Report.

On May 18, 2017, the NEB accepted Pembina’s approach for findings 1, 3, 4, 5 and 8 and requested that Pembina re-submit a revised CAP for findings 2, 6, 7, 9 and 10.

**Audit Findings and Corrective Action Plans**

In the development of the revised CAP, Pembina considered the findings identified in the Report, the positive observations noted in the Report, the *Onshore Pipeline Regulations* (“OPR”), current practices and timelines for Pembina to implement the CAP action items and the NEB’s direction and Guidance from their May 18, 2017 correspondence. The implementation timelines, identified below, assume a 30 day CAP approval from submission to the NEB.

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<sup>1</sup> Pembina Prairie Facilities Ltd. was not included in the scope of the Audit.



Appendix A: **Appendix I – Evaluation of Sub-element 4.2**

<b>Finding 2:</b>	<b>Pembina did not have a process in place to ensure incidents were reported to the NEB where applicable. This is non-compliant with OPR s.52(1).</b>
<b>Pembina’s Response:</b>	<p>In Section 4.4 External Notifications for the Federal Government in SMS 10.1.01, there is a process for describing the regulatory requirement for reporting to the NEB. This includes contact information and lists the reporting requirements of the OPR such as explosion, spills, and interruptions. Section 4.4 of SMS 10.1.01 describes the information to be provided in the preliminary incident report, but does not provide a process for reporting to the NEB. During interviews, Pembina indicated that currently all incident and near-miss reporting to the NEB occurs with guidance from Pembina’s Regulatory Affairs Group.</p> <p>As identified by the NEB, “SMS 10.1.01 does not outline the NEB Online Event Reporting System (“OERS”) requirements, however, Pembina demonstrated, through an Information Request, a draft portion of SMS 10.1.01 which references the OERS for NEB reportable incidents.”</p>
<b>Corrective Actions 2.1, 2.2 and 2.3:</b>	<p><b>2.1</b> Pembina’s Regulatory Affairs Group is creating OERS reporting requirement training, which will be implemented using Pembina’s training software system known as the Pembina Learning System (“PLS”).</p> <p><b>2.2</b> During the Audit, the NEB identified an incident on one of our NEB-regulated systems that was not reported to the NEB. Pembina will be creating a learning from the referenced incident that will be circulated company-wide.</p> <p><b>2.3</b> The NEB’s OERS reporting requirements and Pembina’s process for the reporting of incidents to the NEB will be added to SMS 10.1.01.</p>
<b>Milestone Dates for Corrective Action 2.1, 2.2 and 2.3:</b>	<p><b>2.1</b> Pembina’s Learning System Training to be implemented by no later than November 30, 2017;</p> <p><b>2.2</b> Learning from Incidents to be circulated company-wide by no later than November 30, 2017; and</p> <p><b>2.3</b> Complete revisions to SMS 10.1.01, as outlined above, by no later than November 30, 2017. If required, Pembina’s Learning System Training will be updated to reflect the revisions to SMS 10.1.01.</p>



<b>Finding 6:</b>	<b>Pembina did not have processes and procedures in place for evaluating, monitoring and trending incident and near-miss data. This is non-compliant with OPR s.6.5(1)(s).</b>
<b>Pembina's Response:</b>	<p>At the Audit, Pembina demonstrated its SMART system in place for the collection of data. The SMART system is used to complete analysis and trending of information. The information is being shared within Pembina through senior management and used for decision making purposes.</p> <p>The data trending and data analysis examples provided included:</p> <ul style="list-style-type: none"><li>• Metrics showing the top 5 Root Causes for incidents on a monthly basis;</li><li>• Key Metrics which are scored against targets and circulated internally through a monthly scorecard by Business Unit;</li><li>• Monthly Highlights Report which is circulated to the Board of Directors;</li><li>• Additional trending for vehicle incidents, spill/release data and injuries (Year v. Year comparison); and</li><li>• HSE Metrics Scorecard which is used to evaluate each Business Unit against established targets and impacts all employees' annual incentives.</li></ul>
<b>Corrective Actions 6.1, 6.2 and 6.3:</b>	<p>Pembina will address this non-compliance in two areas:</p> <p><b>6.1</b> Implementation of Pembina's Enterprise Data Warehouse and Microsoft Power Business Intelligence (the "BI") Analytics Tool to allow for more robust analysis and trending of incident and near miss data. The implementation of the BI Analytics Tool will replace the current process for evaluating, monitoring and trending incident and near-miss data using the SMART system and be the centralized repository of incident data.</p> <p>During this time, Pembina has full access to its historical Lotus Notes data (2012-2016) and the SMART system data. Pembina will continue to conduct the required investigations, analysis etc. on both data sets, as required by the OPR, until the transition is completed. This control exists during the transition as was foreseen prior to the transition taking place.</p> <p><b>6.2</b> Update SMS 10.1.01 to reflect the process for evaluating, monitoring and trending incident and near-miss data using the reporting functionality in the SMART system.</p> <p><b>6.3</b> Update SMS 10.1.01 to reflect the process for evaluating, monitoring and trending incident and near-miss data using the reporting and analytic functionality with the BI Analytics Tool.</p>
<b>Milestone Dates for 6.1, 6.2 and 6.3:</b>	<p><b>6.1</b> Business Intelligence Timeline</p> <ul style="list-style-type: none"><li>• Project kick off, requirements gathering and data architecture planning by no later than September 30, 2017;</li><li>• Data analysis/cleansing of historical Lotus Notes data (2012-2016) and SMART system data integration to enterprise data warehouse by no later than December 31, 2017; and</li><li>• Analytics/report development, training, communication and Go Live by no later than March 31, 2018</li></ul> <p><b>6.2</b> Update SMS 10.1.01</p> <ul style="list-style-type: none"><li>• Current process to be included in SMS 10.1.01 update by no later than November 30, 2017.</li></ul>



<b>Milestone Dates for 6.1, 6.2 and 6.3 Continued:</b>	<b>6.3 Update SMS 10.1.01</b> <ul style="list-style-type: none"><li>• Future process to be included in SMS 10.1.01 by no later than March 31, 2018.</li></ul>
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**Appendix B: Appendix II – Incident Management Interaction with other Management System Elements**

<b>Finding 7:</b>	<b>Pembina did not have a hazard inventory. This is non-compliant with OPR s.6.5(1) (d).</b>
<b>Pembina’s Response:</b>	<p>During the Audit, Pembina demonstrated to the NEB “that potential hazards, hazards and controls are considered as part of routine and non-routine task analysis and a standard is available for staff to use when conducting hazard analysis.” Pembina provided 3.1.01 Hazard Identification and Classification as our Standard for hazard identification.</p> <p>The NEB “verified that Pembina does capture new hazards and potential hazards from incidents and near-misses through an ad hoc process.”, but the NEB advised that Pembina had not established an inventory of all hazards and identified hazards as required under OPR s.6.5(1)(d).</p>
<b>Corrective Action 7.1:</b>	<p>Pembina will develop an integrated hazard inventory from all programs.</p> <p>As it relates to the processes associated with the development of an integrated hazard inventory, the objective is to meet the requirements around the identification of hazards and potential hazards of the OPR sections 6.5(1) (c), (d) and (e) which involve:</p> <ul style="list-style-type: none"><li>• Establishing and implementing a process for identifying and analyzing all hazards and potential hazards (OPR 6.5(1)(c));</li><li>• Establishing and maintaining an inventory of the identified hazards and potential hazards (OPR 6.5(1)(d));</li><li>• Establishing and implementing a process for evaluating and managing the risks associated with the identified hazards, including the risks related to normal and abnormal operating conditions (OPR 6.5(1)(e)).</li></ul> <p>In the interim, Pembina has controls in place for hazard identification and a process to collect and track hazard identifications and corrective actions.</p>
<b>Milestone Dates for Corrective Action 7.1:</b>	Pembina is assessing external resources to support this corrective action and anticipates completion date of by no later than March 31, 2018.



<b>Finding 9:</b>	<b>Pembina has not conducted an internal audit that includes the management system and all protection programs. This is non-compliant with OPR s.6.5(w).</b>
<b>Pembina's Response:</b>	<p>During the Audit, Pembina was not able to demonstrate that we had conducted internal audits on all programs as required under OPR s. 6.5(1)(w). The NEB recognized that a newly developed standard for audits was in place for the Damage Prevention Program, but it is the NEB's opinion that the standard is too new to be considered fully implemented at the time of the Audit.</p> <p>The Report noted that Pembina did not have a fully implemented internal audit and quality assurance program for our management system.</p> <p>While reviewing some of the incident investigations conducted by Pembina staff, the NEB identified a concern with the quality assurance program currently in place with respect to classification, including incident types and severity.</p>
<b>Corrective Actions 9.1 and 9.2:</b>	<p><b>9.1</b> Since the Audit, Pembina fully implemented Pembina's Damage Prevention Program Appendix B – Damage Prevention Program Audit Protocol and Appendix C – Management Review and Continuous Improvement. These Appendices will be used when conducting an audit of Pembina's Damage Prevention Program.</p> <p><b>9.2</b> Conduct a baseline internal review of hazard, near miss and incident data regarding quality of selection of incident types and classification of severity. In addition, Pembina will develop a quality assurance process to address areas such as severity classification, root cause determination and preventative/corrective action items.</p>
<b>Milestone Dates for Corrective Action 9.1 and 9.2:</b>	<p><b>9.1</b> Complete audit of Pembina's Damage Prevention Program by no later than December 31, 2017; and</p> <p><b>9.2</b> Baseline internal review and develop a quality assurance process to be completed by no later than December 31, 2017.</p>



<b>Finding 10:</b>	<b>Pembina does not have an effective process for the retaining and maintaining of records related to incident investigations. This is non-compliant with OPR s.6.5(1) (p).</b>
<b>Pembina's Response:</b>	The Audit verified the following: <ul style="list-style-type: none"><li>• Pembina has an established an effective process for generating and managing training documents and records; and</li><li>• Pembina does generate, maintain and retain records. Pembina demonstrated to the NEB that an incident investigation database to track and store information and investigation records are in place. The Report indicates Pembina did not demonstrate there is a process to ensure all applicable incident and near miss investigation records were traceable and trackable.</li></ul>
<b>Corrective Action 10.1:</b>	Pembina will amend SMS 10.1.01 to reflect the process and further detail the requirement to retain and maintain records (including types of documents) in an investigation.
<b>Milestone Dates for Corrective Action 10.1:</b>	Complete revisions to SMS 10.1.01, as outlined above, by no later than November 30, 2017.

#### **Summary of Corrective Action Plan**

Pembina strives to meet all CAP target timelines, but may have to adjust its schedule as CAPs are further developed, documented and implemented. Should Pembina determine that additional time, from what was originally proposed to the NEB, is required to address the CAP for one or more of the findings, Pembina will submit a request through the Secretary's Office.