



# PENGROWTH

PENGROWTH ENERGY CORPORATION

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January 6, 2012

Energy Resources Conservation Board  
Calgary Office, Suite 1000  
5 Street SW  
Calgary, Alberta T2P 0R4

**Attn: Brian Temple, Incident Investigator**

**RE: Pipeline Failure Investigation  
Additional Information Request  
Location: 08-35-063-11 w5m  
FIS#: 20111314**

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This correspondence is in response to your letter dated December 6, 2011 requesting additional information relating to Pengrowth's pipeline failure on the above line. Pengrowth hereby provides the following detailed response to the ERCB as requested:

**1. Regarding the original facility construction**

- a) Provide the approved engineering and construction drawings for the original pipeline header assembly, and the original pipeline riser assemblies**

[Appendix 1](#) contains the approved engineering and construction drawings for the original header and pipeline.

- b) Provide the construction contractor's quality management plan as existed at the time of the original construction.**

[Kana Oilfield Services](#) completed the original header construction, quality control manual is included in [Appendix 2](#).

[Flint Energy Services](#) completed the original pipeline construction, quality control manual is included in [Appendix 3](#).

- c) Provide the construction contractor's inspection plan for the original header assembly and the original pipeline riser assemblies**

Appendix 4 includes Flint Energy Services quality control folder for the original pipeline.

Appendix 5 includes Western Fibreglass quality control folder for the original pipeline.

Appendix 6 includes Kana Oilfield Services quality control folder for the original header assembly.

- d) Provide the qualifications of contractor's on-site supervisory personnel and/or inspection personnel who oversaw construction of the original header and pipeline risers**

Appendix 7 contains the qualifications of inspection personnel who oversaw the original construction.

- e) Provide the daily inspection reports of the original construction work on the header and pipeline**

Appendices 4, 5 and 6 contain inspection reports pertaining to the quality control of the header and pipeline construction.

- f) Provide evidence to verify the construction personnel had received fiberglass pipe installation training from the manufacturer prior to the original construction of the fiberglass pipeline.**

Pengrowth requires the manufacturer to be present during the construction of all fiberglass pipelines. ~~Chris Clark~~ was the Western Fibreglass representative present during the construction. The representative inspected the construction of the pipeline and associated risers and deemed them satisfactory as per the manufacturer's specifications. Appendix 8 contains Western Fibreglass installation procedures.

## **2. Regarding the SCADA control centre operating system**

- a) Provide a description of the SCADA control centre operator training requirements that were in place at the time of the incident**

Pengrowth's training procedure requires new employees or employees changing roles to complete a training competency check-out. The check-out procedure is a three step process which involves an employee being shown a task, demonstrating the task and being tested on the skills by another competent employee.

Upon completion of the three step check-out process the employee must complete a written exam, which is developed to test and document knowledge in that specific area. The exam is reviewed and signed off by senior operations personnel and/or supervisor.

- b) Provide confirmation as to whether the control centre operator was adequately trained as per the requirements**

Appendix 9 includes the completed Judy Creek Production Complex control room check-outs and exam for Warren Hill. Warren was the control room operator at the time of the 08-35-63-11 w5m incident.

- c) Provide copies of all written control centre operating procedures that were in force at the time of the incident**

Appendix 10 includes the following control room procedures;

- Production Complex Control Room Training Workbook - Overview
- Data Capture Training Workbook
- Production Complex Control Room Training Workbook – Work Methods

- d) Provide evidence verifying all identified modifications to system programming such as to start-up logic following power restoration, and response to trip inputs, as identified in Pengrowth's letter of October 5<sup>th</sup>, 2011, which were completed. Should this not be so, provide explanation of reasons why these items have not been completed.**

In our response dated October 5<sup>th</sup> Pengrowth stated that automation changes had been completed at two satellites 04-20-63-11 w5m and 16-04-64-11 w5m. Since the response we have completed changes at two additional satellites 16-27-63-10 w5m and 16-33-63-10 w5m.

Appendix 11 provides signed statements from the certified trade person who completed the changes as well as the code that has been incorporated into the system logic. As previously committed we will have the remaining satellites altered by the end of the second quarter of 2012.

- 3. Regarding the inspection and remedial action taken, following the inspection of the eight fiberglass pipe risers constructed in 2007 (Table 1 of Pengrowth October 5<sup>th</sup>, 2011 letter).**

- a) Provide the qualifications of the personnel conducting the inspections**

The fiberglass risers were inspected by a construction supervisor who has completed Pengrowth's site supervisor training. Appendix 12 contains a copy of the site supervisor manual and associated workbook. The supervisor has also installed several fiberglass pipelines with Western Fibreglass representatives. Prior to the inspections being completed Pengrowth's Integrity Coordinator reviewed the inspection form as well as the 08-35-63-11 w5m failure mechanism with the supervisor to clarify the purpose of the inspections.

**b) Provide the approved engineering criteria used for determining the acceptability or unacceptability of the as found pipeline.**

The inspection form developed for completing the riser inspections was developed based on information from the Star Fibreglass Installation manual (Appendix 8) as well as the 08-35-63-11 w5m failure analysis.

**c) Provide the approved engineering drawings or directions used to retrofit the situations which were determined to be unsatisfactory**

One deficiency was identified during the riser inspections. The surface piping at 08-30-63-10 w5m was improperly fitted at the time of installation resulting in the pipe not resting fully on the existing pipe support. The pipe was re-fitted and fastened to the pipe support with a U-bolt. The nature of this repair did not require an engineered drawing.

**d) Provide documentation to verify the completed retrofit actions received final engineering approval.**

The below photos demonstrate the as found and repaired piping associated with 08-30-63-10 w5m lease piping.





Pipe as found prior to repair.



Pipe properly supported after completion of repair.

Pengrowth is committed to pro-actively meeting regulatory requirements and strives to achieve excellence within all of its operations. I trust that the above information completes the requirements laid out in the ERCB's investigation letter.

If you require additional information or have any questions regarding this matter, please feel free to contact me at 780-333-7150 (office) or 780-706-5153 (cell) or via e-mail at [shelley.maclean@pengrowth.com](mailto:shelley.maclean@pengrowth.com)

Sincerely,  
**PENGROWTH CORPORATION**

A handwritten signature in blue ink, appearing to read 'S MacLean', with a long horizontal flourish extending to the right.

Shelley MacLean  
Integrity Coordinator, Swan Hills Trend

Cc: Kevin Matieshin, Health Safety and Environmental Director, Pengrowth Corporation  
Randy Steele, Swan Hills Trend General Manager, Pengrowth Corporation  
Dale Babiak, Manager of Production and Operations Swan Hills Trend, Pengrowth  
Matt Lema, Manager of Technical Services Swan Hills Trend, Pengrowth Corporation  
Shane Tiessen, Team Lead Asset Integrity, Pengrowth Corporation  
Paul Bothwell, Senior Regulatory Coordinator, Pengrowth Corporation  
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## **APPENDICES**