



Pengrowth Corporation

Application for a Compressor Station Licence
Harmattan East Field

July 13, 2010

ENERGY RESOURCES CONSERVATION BOARD

Decision 2010-025: Pengrowth Corporation, Application for a Compressor Station Licence,
Harmattan East Field

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ENERGY RESOURCES CONSERVATION BOARD

Calgary Alberta

PENGROWTH CORPORATION

APPLICATION FOR A COMPRESSOR STATION LICENCE

HARMATTAN EAST FIELD

Decision 2010-025

Application No. 1613402

1 DECISION

Having carefully considered all the evidence, the Energy Resources Conservation Board (ERCB/Board) hereby approves Application No. 1613402.

2 INTRODUCTION

2.1 Application

Pengrowth Corporation (Pengrowth) submitted an application, in accordance with Section 7.001 of the *Oil and Gas Conservation Regulations*, for a licence to construct and operate a 30-kilowatt electric wellhead compressor unit in Legal Subdivision (LSD) 5, Section 3, Township 31, Range 2, West of the 5th Meridian, in the Harmattan East Field. The compressor would be located about 4.2 kilometres (km) southwest of the Town of Didsbury and would boost gas from an existing wellhead into an existing gas gathering system. The maximum hydrogen sulphide (H_2S) concentration through the compressor would be about 15.0 moles per kilomole (mol/kmol;¹ 1.5 per cent) with a corresponding emergency planning zone (EPZ) of 1.59 km.

2.2 Interventions

Interventions were filed by Ian Taylor and Mary Taylor, Marie Barkley and Barry Barkley, and Henry Kuelker and Ursula Kuelker. All the intervening parties are residents within the EPZ.

The interveners raised concerns regarding personal consultation, public safety, and existing pipelines that would tie into the compressor.

2.3 Hearing

The Board held a public hearing in Didsbury, Alberta, on May 13, 2010, before Board Member G. Eynon, P.Geol. (Presiding Member), Vice-Chairman B. T. McManus, Q.C., and Acting Board Member A. Warren, P.Eng.

On May 12, 2010, the panel and ERCB staff viewed the proposed compressor site and the relevant surrounding area, including a similar compressor site operated by Pengrowth at LSD 2-2-31-2W5M, and the properties of the intervening parties (see Figure 1).

Those who appeared at the hearing are listed in Appendix 1.

¹ H_2S concentration is expressed in moles of H_2S per kilomole of natural gas (methane).

3 ISSUES

The Board considers the issues respecting the application to be

- need for the compressor,
- public safety,
- pipeline integrity and suitability for sour service, and
- public consultation.

In reaching the determinations contained in this decision, the Board considered all relevant materials constituting the record of this proceeding, including the evidence and argument provided by each party. Accordingly, references in this decision to specific parts of the record are intended to assist the reader in understanding the Board's reasoning relating to a particular matter and should not be taken as an indication that the Board did not consider all relevant portions of the record with respect to that matter.

4 VIEWS OF THE APPLICANT

Pengrowth stated that it acquired the existing well at LSD 5-3-31-2W5M (5-3) in 2007. It explained that gas from the well used to flow south into the Bonavista Carstairs gas gathering system at LSD 5-22-31-2W5M, but that as a result of consolidation of assets in the area, the gathering system pressures had increased to the point where the 5-3 well would not flow against those pressures. Pengrowth further stated that the 5-3 well site would have an H₂S blending unit installed to ensure that the gas leaving the site would not exceed the licensed maximum H₂S concentration of the gathering system of 9.9 mol/kmol (0.99 per cent). Pengrowth confirmed that without the compressor the 5-3 well would not be economic and asserted that the compressor's primary purpose would be to compress gas from the 5-3 well.

With regards to safety, Pengrowth testified that the entire facility at the 5-3 well site was equipped with safety features, such as emergency shutdown (ESD) valves and gas and fire detectors, as well as a supervisory control and data acquisition (SCADA) system, that would physically isolate the compressor inlet and shut down the entire site in the event of an emergency. Pengrowth stated that the proposed compressor would be safe.

Pengrowth confirmed that the proposed compressor would not impact the size of the EPZ associated with the 5-3 well site, as the EPZ is dictated by the H₂S concentration, operating pressure, and length of pipelines associated with the facility. It further confirmed that the emergency response plan (ERP) currently in place for the site would not change as a result of the addition of a compressor. Pengrowth was aware that one of the interveners had been identified as having special needs, and the company committed to initiate notification and evacuation of this party at a level-1 emergency.² Pengrowth indicated that it submitted a revised ERP to the ERCB in December 2009 as a result of changes in the field and some regulatory changes to *Directive 071: Emergency Preparedness and Response Requirements for the Petroleum Industry*. It submitted that the ERCB deemed its ERP technically complete in January 2010.

² Low risk level—There is no danger outside the licensee's property, there is no threat to the public, and there is minimal environmental impact. The situation can be handled entirely by licensee personnel.

In response to the interveners' concern with regard to the pipeline from LSD 5-3-31-2W5M to LSD 2-2-31-2W5M (Pipeline Licence No. 31658-1) that crosses the Kuelkers' land, Pengrowth stated that the pipeline was evaluated in January 2010 to ensure that it was suitable for continued service. It stated that the pipeline received an in-line inspection for corrosion and that no corrosion features were detected. An engineering assessment on a pipeline cutout deemed the construction to be suitable for its intended service. The pipeline was also pressure tested, and it was Pengrowth's opinion that the pipeline was safe for the licensed service.

With regard to public consultation, Pengrowth noted that it received written confirmation of non-objection from the owner of the land where the compressor would be located. It further noted that it conducted personal consultation over the full extent of the EPZ. Pengrowth noted the interveners concerns with its consultation and stated that it conducted extensive consultation with them, which included using an appropriate dispute resolution process.

5 VIEWS OF THE INTERVENERS

Mr. Taylor stated that his main concern was health and safety and that what he really wanted was a guarantee by Pengrowth that the facility would be 100 per cent fail-safe.

He also expressed concern about Pengrowth's public consultation process, which in his opinion was flawed. He expressed frustration with the written form Pengrowth used in the personal consultation process. In his view, the form was designed to obtain only one answer, non-objection, since there was no place to indicate an objection. Mr. Taylor asserted that Pengrowth's approach of separating the compressor from the rest of the development, as well as future developments linked to the compressor, was not in compliance with Section 8.3.2 of *Directive 056: Energy Development Applications and Schedules*. Mr. Taylor argued that the application should be denied on the basis of flawed public consultation.

Ms. Barkley stated that she was concerned about the evacuation procedures in the event of a sour gas release. She indicated that the prevailing winds are from the west and any released gases would travel directly toward her residence. Ms. Barkley also stated that her husband's special needs status required additional consideration.

Mr. Kuelker raised concerns about the existing pipeline that crossed his land, which would carry gas from the proposed compressor site. He believed he had signed a contract for a sweet natural gas pipeline and questioned whether it had been properly constructed for sour gas service. He believed that it was possible that the materials, design, welding, and configuration were not adequate for sour gas service. Mr. Kuelker indicated that he had not been notified of any change in the H₂S content of the pipeline. He questioned the need to license the compressor for an H₂S concentration of 15 mol/kmol, given that the pipeline that would be leaving the site was licensed for 9.9 mol/kmol. Mr. Kuelker requested the results of the in-line pipeline inspection that he had been promised but had not yet received.

6 FINDINGS OF THE BOARD

The Board notes that while the interveners argued that the compressor and associated facilities should not be considered separately from the overall development, there was no suggestion that

the equipment is not required for continued development of the resources. The Board finds that there is a need for the compressor, as it is required to enable the 5-3 well production to flow into the existing gathering system.

The Board understands the concerns regarding the inability to record an objection on the written form Pengrowth had used in the personal consultation process. The interveners also raised concerns with the consultation process in general. Under Alberta's energy regulatory scheme, it is the applicant's responsibility to notify and obtain, where possible, confirmation of non-objection from parties within the personal consultation radius. It is the responsibility of an objecting party to ensure that its objection is filed with the ERCB. A hearing may be held to allow this party to formally raise its concerns in front of the Board. In this case, the interveners were notified, filed their objections, and a hearing was held. The Board finds that the actions of Pengrowth met the notification and consultation requirements.

The Board notes that the EPZ for the proposed compressor falls within the existing EPZ associated with Pengrowth's existing facilities. Further, the Board notes that Pengrowth has an ERP related to this existing EPZ that was approved by the ERCB in January 2010. The Board finds that the compressor will not have any incremental impact on the size of the existing EPZ and Pengrowth's current ERP adequately addresses public safety in the area of the proposed compressor. The Board notes that Pengrowth has design features, including ESD valves, alarmed gas and fire detection systems, and a SCADA system connected to the Olds gas plant, that would ensure that the facility is operated and monitored in a safe manner.

In regard to the Barkleys' concern regarding egress, the Board finds that the ERCB's safety requirements and the additional measures set forth by Pengrowth will adequately address the issues raised by the Barkleys. Specifically, Pengrowth has committed to notifying the Barkleys on a priority basis in the event of an emergency. With respect to the egress route, the Board finds it to be satisfactory.

Based on the above, the Board finds that the proposed compressor will not negatively impact public safety.

Regarding the natural gas pipeline crossing the Kuelkers' property, the Board notes that although the pipeline would receive gas from the proposed compressor, it is an existing licensed pipeline that is in compliance with ERCB requirements. While the compressor would be licensed for 15 mol/kmol H₂S, the compressed gas would pass through a blending unit that would ensure that the H₂S content of the outlet gas is compatible with the pipeline licence of 9.9 mol/kmol. The Board further notes that the pipeline in question has been qualified and licensed to carry natural gas with sour content consistent with the blended outlet stream from the proposed compressor. Accordingly, the Board finds that the pipeline is suitable for the proposed operations.

After due consideration of the evidence provided, the Board hereby approves Application No. 1613402.

Dated in Calgary, Alberta, on July 13, 2010.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

G. Eynon, P.Geol.
Presiding Member

<original signed by>

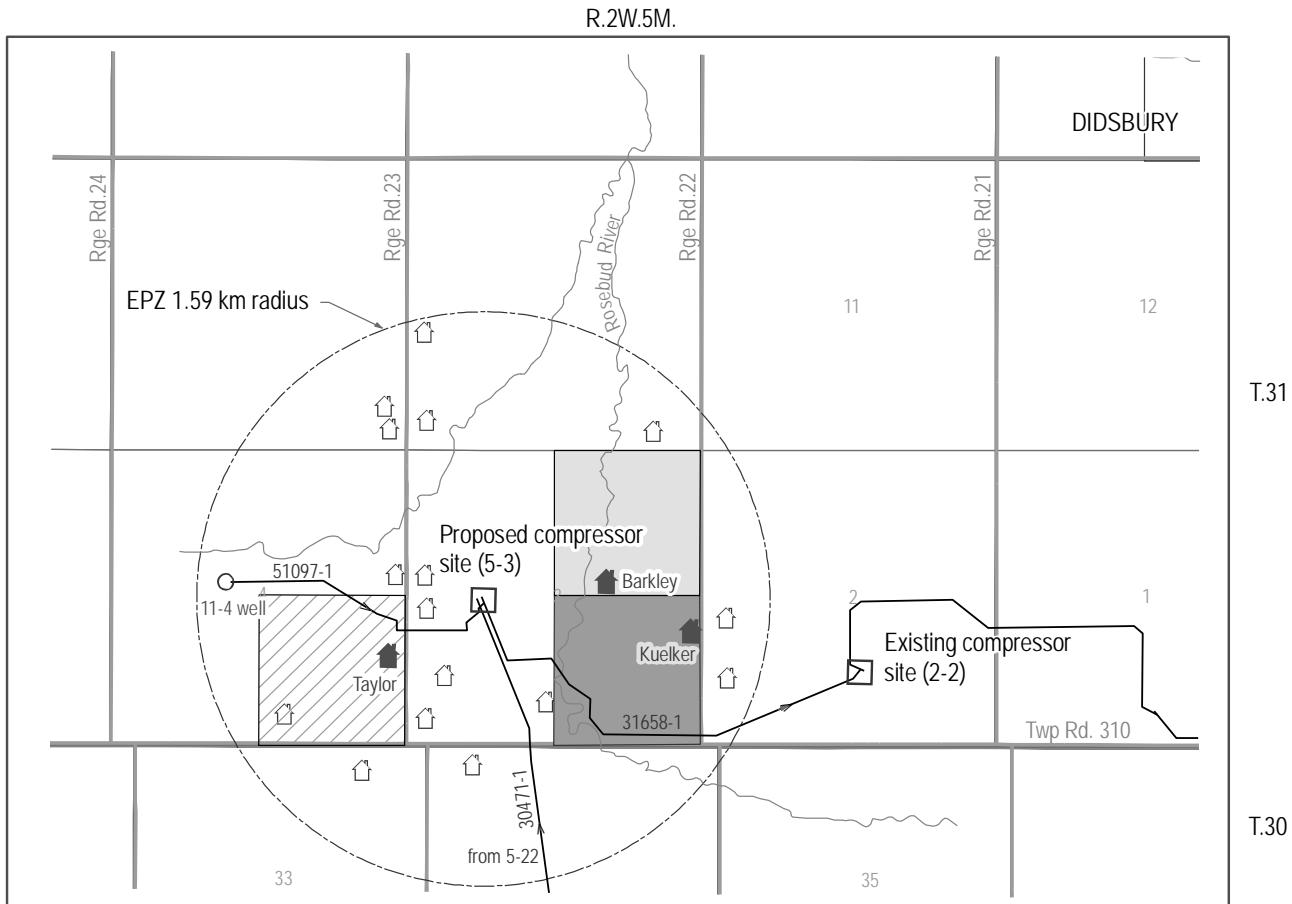
B. McManus, Q.C.
Vice-Chairman

<original signed by>

A. Warren, P.Eng.
Acting Board Member

APPENDIX 1 HEARING PARTICIPANTS

Principals and Representatives	Witnesses
Pengrowth Corporation T. Owen	J. Bell, of Keg Land Consultants
I. Taylor	S. La Croix
M. Barkley	T. Kennedy, P.Eng.
H. Kuelker	J. R. Swan, C.E.T., of Black Gold Emergency Planners Inc.
	S. P. Tiessen
Energy Resources Conservation Board staff	
D. Burns, Board Counsel	
K. Stilwell, Board Counsel	
M. Alboiu, P.Ag.	
A. Taksas	
D. Grzyb, R.E.T., P.L.(Eng.)	
J. Ludwick	

Legend

	Barkley land and residence		Other residences within EPZ
	Kuelker land and residence		Licensed pipeline
	Taylor land and residence		

Figure 1. Project area