CBM REGULATION

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Introduction

In Alberta, coalbed methane (CBM) is currently regulated in the same way as other forms of natural gas. The main energy regulator in the province is the Alberta Energy and Utilities Board (EUB). If CBM involves the production of non-saline water, Alberta Environment is also involved in regulation. The regulatory roles of both the EUB and Alberta Environment will be reviewed in this section.

Alberta Energy has set up a multi-stakeholder advisory committee (MAC) to determine if there are areas where the existing rules and regulations can be improved to handle issues specific to CBM. At the time of writing, the MAC's final recommendations had not yet been released.

Role of the EUB

The EUB is a quasi-judicial tribunal with a technical and legal staff that regulate Alberta's oil and gas industry, including CBM. The EUB's regulatory requirements are set under acts, regulations, guides, directives and bulletins. For CBM, the main regulatory requirements are set out in the following:

- *Oil and Gas Conservation Act* and regulations
- *Directive 56: Energy Development Applications and Schedules*
- *Directive 65: Resources Applications for Conventional Oil and Gas Reservoirs*
- *Guide 51: Injection and Disposal Wells*
- *Bulletin 2005-08: Consultation Regarding Proposed Changes to Reservoir Related Well Spacing Regulations, Application Requirements and Application Review Process*

It is important to be aware that EUB bulletins do not set out EUB requirements. Bulletins contain announcements to inform industry and the public of a EUB activity, such as a consultation or new proposed requirements. Guides and directives are documents setting out new or amended EUB requirements to be implemented and followed by licensees under the jurisdiction of the EUB.

The EUB regulates a number of activities including:

- well spacing;
- saline water production and disposal;
- well, facility and pipeline location;
- drilling;
- production operations;
- flaring and venting;
- noise; and
- data collection and submission.

The regulation of well spacing and saline water production will be discussed here.

(a) Well Spacing

CBM wells generally produce at low gas rates and low pressures. Therefore to optimize gas recovery from these wells, it is often necessary to locate the CBM wells closer together than conventional gas wells. Standard gas well spacing for most of Alberta is one well per section (*Oil and Gas Conservation Regulations*, section 4.020). It is anticipated that spacing for CBM wells could range from two to eight wells per section, or more.

To reduce the spacing from set standards, an application must be filed with the EUB in accordance with Directive 65. The application under Directive 65 requires that companies consult with landowners and occupants in the area.

In March 2005, the EUB released Bulletin 2008-05 that proposed to remove the notice requirement for landowners. Landowners are concerned that this new downhole spacing approval process will make it more difficult for them to oppose later drilling and surface applications. The EUB asked for feedback on the Bulletin until June 2005 and, at the time of writing, the Bulletin has not yet been implemented.

(b) Saline Water Production

Water may be produced in association with CBM development. If the well is drilled into a coal zone that is saturated with water, the water must be extracted to reduce pressure and allow the gas to be released. This is called dewatering. The produced water may be saline or non-saline. "Saline water" is defined as water with more than 4,000 milligrams of total dissolved solids per litre. Some deeper projects in the Mannville zone have produced saline water and some Ardley test wells have produced water of varying quality.

Any saline water that is produced during gas production must be returned to a similar underground environment through deep disposal wells. An EUB approval is required for the disposal of water produced in conjunction with oil and gas development (Oil and Gas Conservation Act, section 39). The EUB regulates the production, handling, and use of water produced in association with CBM under Directive 65 and Guide 51.

Role of Alberta Environment

Alberta Environment is responsible for the management of water in the province, including non-saline water. "Non-saline water" is defined as water with less than or equal to 4,000 milligrams of total dissolved solids per litre.

If non-saline water is produced from a CBM well, it must be handled according to regulations set out in the Water Act and Alberta Environment's *Guidelines for Groundwater Diversion*. Every CBM well that produces non-saline water requires a license to divert, use or dispose of that water from Alberta Environment.

Before Alberta Environment issues a license, evidence must be provided to Alberta Environment to show that the diversion will not cause adverse effects on the water supply of nearby users over the short or long term, and will not cause adverse effects on the source aquifer or other aquifers. The company must also conduct a preliminary groundwater assessment (PGA) containing baseline data and other required information. The PGA must be submitted to Alberta Environment before drilling or groundwater diversion begins. It should be noted that the *Water Act* and regulations prohibit well construction that depletes more than one aquifer to prevent the co-mingling of groundwater of different quality and salinity.

The company then submits an application to the Director, an official with Alberta Environment. The Director will provide notice of the application, and this is often done by advertising in the local newspaper. The advertisement will state that interested parties may

submit a written Statement of Concern to the Director within the time period specified in the notice. If the license is issued, parties who submitted a statement of concern have a right to appeal the decision to the Environmental Appeals Board.

If the produced water is non-saline, Alberta Environment and the EUB may consider surface water discharge or re-injection into an aquifer of a similar water quality.

Conclusion

If a CBM well is being drilled on your property, you may want to ask the company specific questions with respect to well spacing and water production. Some questions to ask include:

- What will be the density of wells per section?
- Can they use directional drilling or drill from another location?
- Will it be necessary to dewater the coal seams?
- Will the produced water be saline or non-saline?
- Will the company provide baseline data to the landowners?
- What substances will the company test for in the water wells?

If you have additional questions, you can contact the Environmental Law Centre by phone: 1-800-661-4238; e-mail: elc@elc.ab.ca, or in person: 204, 10709 Jasper Avenue, Edmonton.