



EB-2012-0392

IN THE MATTER OF the Ontario Energy Board Act,
1998, Schedule B;

AND IN THE MATTER OF an application by Den-Mar
Brines Limited to the Ministry of Natural Resources for
an injection permit to inject natural gas into a
geological formation for the purposes of enhancing
the recovery of formation water.

REPORT OF THE BOARD

April 4, 2013

Overview

Den-Mar Brines Limited (“Den-Mar”) filed an application dated September 27, 2012 with the Minister of Natural Resources, Petroleum Resources Centre (the “MNR”) for an injection permit to inject natural gas into a geological formation for the purposes of enhancing the recovery of formation water¹ (the “Application”). The point of injection proposed in the Application is within 1.6 kilometres of an area designated as a gas storage area under the *Ontario Energy Board Act, 1998*. As such, pursuant to section 11 (2) of the *Oil, Gas, and Salt Resources Act* the MNR has referred the Application to the Board for a report.

Recommendation

The Board recommends approval of the Application for the injection permit.

No party has objected to the Application, including Union Gas Limited (“Union”), the owner of the adjacent Bluewater Storage Pool. MNR and Board staff raised no concerns.

The City of Sarnia (the “City”) did not object to the Application but raised concerns about the visual and noise impact of the operation.

Application

On October 25, 2012 the Board issued a Notice of Application (the “Notice”) and Letter of Direction with respect to this Application. The Notice was served and published as directed by the Board. The Notice set out details of Den-Mar’s Application to the MNR for an injection permit to inject natural gas into a well located within 1.6 km of a Designated Storage Area (DSA).

Den-Mar’s Sarnia 7-6-II Pool is within 1.6 kilometers of the DSA for Union’s Sarnia 5-3-II Pool. The Notice further specified that the Application was referred to the Board by the MNR on October 2, 2012, pursuant to section 11(2) of the *Oil, Gas and Salt Resources Act*.

Den-Mar is seeking the injection permit to inject natural gas into a geological formation for the purposes of enhancing the recovery of formation water.

The *Oil, Gas, and Salt Resources Act* and *Ontario Regulation 245/97, Exploration,*

¹ Water present with gas in reservoirs

Drilling and Production, provide a framework to the MNR to consider an application for a permit for injection and to refer the Application to the Board for a report.

Section 11 of the Oil, Gas and Salt Resources Act provides:

- 11.** (1) No person shall, unless the person is the holder of a permit for the purpose, inject oil, gas, water or another substance into an area, including a geological formation, in connection with a project for,
- (a) enhancing the recovery of oil, gas, formation water or another substance;
 - (b) injecting, storing or withdrawing oil, gas or another approved substance; or
 - (c) disposing of oil field fluid. 2010, c. 16, Sched. 10, s. 3 (4).

Referral to Board

- (2) If the point of injection proposed in an application for a permit under subsection (1) is within 1.6 kilometres of an area designated as a gas storage area under the *Ontario Energy Board Act, 1998*, the Minister shall refer the application to the Board for a report. 1996, c. 30, s. 65; 1998, c. 15, Sched. E, s. 24 (1).

Issues

In considering whether or not to issue a favourable report to the MNR the Board has considered the following three issues: the need for the permit to inject; the impact on the adjacent DSA; and, landowner issues. Each of these issues is discussed below.

Need for Permit to Inject

Den-Mar stated in its Application that it has produced the Sarnia 7-6-II pool as a brine production system since late 2004. The brine contained in the pool is of excellent quality for use as a dust suppressant and to dissolve and inhibit ice on bridge overpasses.

Den-Mar stated that with large brine withdrawals from the pool over a number of years, the reservoir pressure necessary to force the brine remaining in the pool to the producing wells has declined sufficiently that the natural brine production rates can no longer keep up with brine requirements. Den-Mar requires natural gas injection into the pool to provide the reservoir energy necessary for brine withdrawal rates to keep up to brine requirements.

The Board accepts Den-Mar's evidence that the gas injection is needed to maintain brine production from the pool.

Impact on the Adjacent DSA

Den-Mar stated that the gas injection scheme will have no effect on the gas storage operations within the Sarnia 5-3-II pool currently operated by Union. Den-Mar also submitted that the natural gas injection scheme will allow it to keep producing brine from the pool at rates sufficient to keep pace with high brine spreading requirements. Den-Mar maintained that the reservoir pressure increase contemplated by this natural gas injection will not bring the pool pressure beyond the original reservoir pressure within the pool, so there is no danger of the injected natural gas escaping from the underground container.

In its submission, the Petroleum Operations Section of the MNR agreed with Den-Mar's assessment that there will be no effect on the adjacent Sarnia 5-3-II Designated Gas Storage area as a result of the proposed injection scheme.

In its submission, Union confirmed that the location of the proposed injection well is within 1.6 kilometres of Union's Bluewater Storage Pool, and as such Union has an interest in any drilling activities adjacent to its storage pools. Union agreed with the MNR that there will be no impact on the Bluewater Storage Pool with the work proposed by Den-Mar. If in the future Den-Mar proposes additional work in the Sarnia 7-6-11 Pool, Union submitted that it should be notified and provided with an opportunity to review and comment on the proposal.

The Board accepts Den-Mar's evidence, as supported by MNR's submission and Board staff's submission, that there will be no adverse impact on Union's Sarnia 5-3-II pool.

Landowner Matters

All landowners are compensated based on their lease arrangements with Den-Mar. The brine pipelines and storage tanks are already in place, and the brine pipeline from the gas injection well will be used as the natural gas injection pipeline to the injection well, so no significant construction activities are required to commence gas injection.

The City submitted a letter of comment on March 4, 2013. The City stated that

neighbours expressed concerns about the visual impact and noise emanating from the wells. The City also requested that any modification to this operation take into consideration the visual and noise impact of such action and that Den-Mar be required to mitigate any visual or noise impacts on the neighbours.

Den-Mar responded to the letter of comment on March 5, 2013. Den-Mar submitted that it does not expect there will be any impact with the modifications it is proposing. Den-Mar stated that all of the infrastructure is in place and the system is still connected to Union. Den-Mar also stated that all it is now doing is reversing the flow of the gas and that instead of selling gas it will be buying gas.

Den-Mar submitted that it has worked co-operatively with its neighbours and the City and submitted that there will be no additional impact with injection of gas.

The Board concludes that Den-Mar has addressed issues of visual impact and noise satisfactorily in the past and that the proposed injection is unlikely to introduce new forms of disruption.

Conclusion

For all of the above noted reasons the Board recommends approval of the Application for the injection permit.

ISSUED at Toronto, April 4, 2013

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary