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**REPORT OF THE ONTARIO ENERGY BOARD  
TO THE MINISTER OF NATURAL RESOURCES AND FORESTRY  
ON  
APPLICATION BY  
PEMBINA INFRASTRUCTURE AND LOGISTICS LP  
APPLICATION FOR EXPANSION OF CORUNNA FACILITY  
WITHIN 1.6 KM OF THE DOW MOORE STORAGE POOL**

**EB-2015-0032**

**Before: Cathy Spoel, Presiding Member**

**Date: September 15, 2016**

## 1. INTRODUCTION AND SUMMARY

Pembina Infrastructure and Logistics LP (Pembina) filed an application with the Ministry of Natural Resources and Forestry (MNR) under section 11 of the *Oil, Gas and Salt Resources Act* (OSGRA) for approval to expand its storage capacity by converting one unused salt mining cavern into a natural gas liquids storage cavern (Project)<sup>1</sup>. On February 5, 2015 the MNR referred the application to Ontario Energy Board (OEB), as required by subsection 11(2) of the OSGRA, as the Project is within 1.6 kilometres of an area designated as a gas storage area under the *Ontario Energy Board Act, 1998* (the OEB Act).

The Project is part of Pembina's Corruna Storage Terminal (Corruna Facility). It is located in St. Clair Township in the County of Lambton. The Project involves injection of substances for storage and is located within 1.6 km of Enbridge Gas Distribution Inc.'s (Enbridge) Dow Moore Designated Storage Area (Dow Moore Pool). A map showing the general location of the Corruna Facility within 1.6 km from Dow Moore Pool boundaries is attached in Appendix A.

The Project encompasses the abandonment of one existing well and the drilling of two injection and withdrawal wells into a suspended (not in use) Cavern 45 to be converted to storage.

Having reviewed the evidence, the OEB finds that the integrity of the Dow Moore DSA will not be adversely affected by Pembina's conversion Cavern 45 to storage.

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<sup>1</sup> Pembina originally applied on January 22, 2015 for approval: i) to convert Cavern 45 into a storage cavern by abandoning the current entry well and drilling two new wells (Cavern 45 Conversion); and ii) a permit to expand and convert into natural gas liquids storage 11 salt caverns in the Corruna Facility, over the next fifteen years (Corruna Facility Long-term Conversion Project). On April 29, 2016 Pembina amended its application by removing the request for approval for the Corruna Facility Long-term Conversion Project, leaving only the request for approval of the Cavern 45 Conversion.

## 2. APPLICATION AND REGULATORY REQUIREMENTS

To convert the Cavern 45 into storage Pembina will need to abandon the current entry well and drill two injection/withdrawal wells (wells BR-45 and HC-45). These operations will require well drilling licences and an approval of the abandonment plan by the MNRF.

In Ontario the MNRF is responsible for the technical and safety aspects of storage development and operation. The MNRF ensures the implementation of the Canadian Standards Authority Z341 "Storage of Hydrocarbons in Underground Formations" (CSA Z341) and the *Gas and Salt Resources of Ontario, Provincial Operating Standards* (Provincial Standards). Development and operation of Pembina's Project have to fulfill the requirements of the CSA Z341 and the Provincial Standards to the satisfaction of the MNRF. When considering the issue of impact of the activities on the integrity of natural gas storage pools that are within 1.6 kilometers the OEB relies on the expertise and regulatory authority of the MNRF. The relevant legislation is set out below.

Section 11 of the OSGRA:

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).e

### 3. PROCESS

The OEB issued a Notice of Application on March 6, 2015. Pembina served and published the notice as directed. Enbridge, Union Gas Limited, MNRF, and Aamjiwnaang First Nation requested and were granted intervenor status. The OEB proceeded by way of a written hearing.

OEB staff and MNRF were active participants in the proceeding. After a written discovery process was concluded, the MNRF filed written submissions indicating that Pembina's application should not be approved because the evidence was insufficient and did not adhere to the Risk Assessment and the Geomechanical Assessment.

At Pembina's request, the OEB placed the proceeding in abeyance to allow Pembina the time to complete the studies required to satisfy the concerns raised by the MNRF. Pembina filed additional evidence on the Geomechanical Assessment and Risk Assessment on March 28, 2016 and April 29, 2016. On June 2, 2016 the OEB, by way of procedural order, re-instated the proceeding, accepted the amendment of the application and set the schedule for the interrogatories phase and submissions.

The discovery was completed with Pembina's responses to OEB staff's and MNRF's interrogatories on June 30, 2016. On July 15, 2016 OEB staff and the MNRF filed written submissions, Pembina responded on July 20, 2016. The MNRF filed supplemental submissions on July 20, 2016, which closed the record for the proceeding.

#### 4. ISSUES CONSIDERED

In accordance with the OEB approved Issues List the review of the application included the following:

1. Is there a need for the proposed project?
2. Are there any outstanding landowner matters related to the proposed project and has there been adequate consultation with affected parties?
3. Has there been adequate consultation with Indigenous Communities?
4. Are there any adverse impacts of the proposed project on the integrity and operations of the adjacent Dow Moore Designated Storage Area and if so, what mitigation measures are appropriate?

The evidence and the OEB's findings related to each of these issues are described below.

#### **4.1 NEED FOR THE PROPOSED PROJECT**

Pembina is a wholly-owned subsidiary and general partner of 1195714 Alberta Ltd. Pembina owns and operates Corruna Facility. The twenty four caverns at the Corruna Facility were originally drilled and mined for salt by Dow Chemical ULC between 1970 and 1986. In the late 1990's the salt solution mining ended. Currently, 10 out of 24 existing caverns have been used for storage of various hydrocarbon liquids, and 14 caverns are suspended-out of service. Cavern 45 is a suspended cavern that Pembina intends to convert to storage in 2017.

In Pembina's submission the need for the Project is based on the continued and future demand for ethane storage for two major local petrochemical facilities, local refineries and for seasonal winter storage of butane and propane.

OEB agrees that Pembina has demonstrated a need for the Cavern 45 conversion.

## **4.2 LANDOWNER MATTERS AND CONSULTATION WITH AFFECTED PARTIES**

There are no landowner issues related to the Corruna Facility property as all of the land is owned by Pembina. As directed by the OEB, Pembina served the Notice of Application on all of the Dow Moore landowners, and other potentially affected parties, including the owners and operators of rail lines, telecommunication and other utilities affected by the Project and to Clerks of the Township of St. Clair and the County of Lambton. Pembina also regularly updated all originally notified parties on the progress of the OEB proceeding.

Pembina has received no indications of concern regarding the Project. The OEB is satisfied that there are no landowner matters or matters affecting other parties related to the development and operation of Cavern 45.

### 4.3 CONSULTATION WITH INDIGENOUS COMMUNITIES

Pembina's consultation with Indigenous communities included the Aamjiwnaang First nation (AFN). The AFN Indian Reserve No. 45 (AFN Reserve) borders the Corruna Facility northern property line along Lasalle Road. The AFN is a registered intervenor in the proceeding but did not actively participate.

Pembina's consultation with the AFN included invitations to open houses, meetings with the AFN Environmental Committee, meeting with the Band Council and Chief Plain at the AFN, and providing written updates on the application and the Project.

Pembina met with the AFN Environmental Committee on May 5, 2015 to discuss and address AFN's concerns about the location of the caverns beneath the AFN's land and about an increase in traffic due to drilling operations. Pembina clarified to the AFN that none of the Project activities are located beneath the AFN Reserve. Pembina said that the traffic increase will be minimal and temporary. That was the only concern that was raised by the AFN in the consultation process.

Pembina submitted that it kept the AFN up to date with the proceeding and that on March 7, 2016 Pembina met with the Chief and Council of the AFN. Pembina stated that, as of June 14, 2016, the AFN did not raise any further concerns with the impact of the Project. Pembina stated it will continue to meet with AFN to address and follow up on any concerns or questions raised by the AFN.

The OEB finds that Pembina proactively initiated and maintained communication and consultation with the AFN. The OEB expects that Pembina will continue consultation with the AFN in the subsequent stages of regulatory approvals, construction and operation of the Cavern 45.

OEB finds that Pembina has adequately engaged with the AFN. OEB finds that the duty to consult has been sufficiently discharged for the Project as of the date of this Report.

#### 4.4 INTERGRITY OF THE DOW-MOORE STORAGE POOL

The issue of the proximity of the Corruna Facility to Enbridge's Dow Moore Pool and the potential impacts on the integrity and operation of gas storage services provided by Dow Moore Pool has been considered in this proceeding.

In support of its application, Pembina originally filed certain geomechanical and risk assessment evidence.

Pembina filed the following studies in the summer of 2015:

- Hazard and Quantitative Risk Assessment, (Stantec Consulting Inc.) to address components of section 7.1 and 7.2 of the CSA Z341, July 24, 2015;
- Geological studies to address requirements of section 7.3 of the CSA Z341:
  - Geomechanical Assessment ,1987 (caverns 55 and 56);
  - Geomechanical Assessment , 1992 (cavern 65);
  - Geomechanical Assessment ,1994 (caverns 61,62,69 and 70)
  - Qualified Opinion by RESPEC showing the current adequacy of the geomechanical assessments (RESPEC Opinion).

In the spring of 2016, Pembina filed the following additional studies:

- Cavern 45 Assessment of Neighbouring Activities to address the requirements of section 7.2 of the CSA Z341 Assessment of Neighbouring Activities, (Stantec Consulting Inc.), April 27, 2016.
- Operational and High-Level Geomechanical Review of Pembina NGL Canada's Sarnia Cavern Storage Facility, (RESPEC and PB Energy Storage Services Inc.), March 2016.

The MNRF, as a registered intervenor, actively participated in the proceeding and reviewed all the reports including the two additional reports filed in 2016 and stated in its written submissions dated July 20, 2016 that the updated reports and the application materials are in accordance with the requirements of CSA Z341 and the Provincial Standards. The MNRF also stated that it had no concerns regarding potential impacts to Enbridge's Dow Moore Designated Storage Pool.

Enbridge stated that it has no objection to the conversion of Cavern 45 on the condition that the development and operations adhere to the current requirements of the CSA Z341. Enbridge also asked Pembina to keep it informed about plans and activities to convert the other 10 suspended use caverns to storage, which are not part of this

application. Pembina indicated it continuously and regularly communicates with Enbridge to discuss the information on the Cavern 45 conversion and will continue to do so.

The OEB is satisfied with the ongoing communication between Enbridge and Pembina about the Cavern 45 conversion and its potential impacts on the integrity of Dow Moore Pool.

The OEB is satisfied with Pembina's evidence on compliance with all applicable CSA Z341 requirements and the Provincial Standards.

## 5. RECOMMENDATION

The OEB recommends to the Minister of Natural Resources and Forestry approval of the application by Pembina pursuant to section 11(2) of the *Oil, Gas and Salt Resources Act* and finds that conversion of Cavern 45 into storage, located in Pembina's Corrunga Facility, will have no adverse impacts on the integrity of Enbridge's Dow Moore Designated Storage Pool located within 1.6 kilometer radius of the Corrunga Facility.

**OEB'S COSTS OF THIS PROCEEDING**

Pembina shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.

**DATED** at Toronto, September 15, 2016

**ONTARIO ENERGY BOARD**

*Original Signed By*

Kirsten Walli  
Board Secretary

Appendix A  
Map of the Corruna Facility  
EB-2015-0032

AFN INDIAN RESERVE NO. 45

