



ONTARIO ENERGY BOARD

OEB STAFF SUBMISSION July 15, 2016

Pembina Infrastructure and Logistics LP

**Application for Expansion of Corunna Facility
within 1.6 km of the Dow Moore Storage Pool**

EB-2015-0032

Introduction

Pembina Infrastructure and Logistics LP (Pembina) filed on January 22, 2015, with the Ministry of Natural Resources and Forestry (MNRF) an application pursuant to section 11 of the *Oil, Gas and Salt Resources Act* (OSGRA) for approval to expand the storage capacity by converting one unused salt mining cavern into natural gas liquids storage cavern (Project). On February 5, 2015 the MNRF 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 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).

The OEB determined¹ that the review of the Pembina's application will include the following four issues:

1. Is there a need for the proposed project?
2. Are there any outstanding landowner matters related to the proposed project?
3. Has there been adequate consultation with potentially affected parties?
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 Project by Pembina 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 considered and tested the evidence on the four issues noted above, OEB staff submits that Pembina's application be approved. However, in OEB staff's view the approval of Pembina's application should be conditional on having on the record MNRF's confirmation that it has no concerns with the impacts of the Project on the adjacent Enbridge's Dow Moore Pool (Issue 4).

¹ EB-2015-0032, OEB Decision on Issues List, May 8, 2015

Application

Originally, when Pembina filed its application with the OEB it asked for the following:

- a licence to convert Cavern 45 into a storage cavern by abandoning the current entry well and drilling two new wells (Cavern 45 Conversion);
- a permit to expand and convert into natural gas liquids storage 11 salt caverns in the Corunna Facility, over the next fifteen years (Corunna Facility Long-term Conversion Project)

On April 29, 2016 Pembina informed the OEB that it would like to amend its application by removing the request for approval for the Corunna Facility Long-term Conversion Project, leaving only the request for approval of the Cavern 45 Conversion.

To convert the Cavern 45 into storage Pembina stated that it will need to abandon the current entry well and drill two injection/withdrawal wells (wells BR-45 and HC-45).

OEB staff submits that these operations will require approval of the abandonment plan by the MNRF and licences from the MNRF, pursuant to section 40 of the OEB Act. At this time Pembina has not filed the abandonment plan or licence applications with the MNRF.

Pembina stated that it will apply to the MNRF for a licences for Cavern 45 wells and that that it will adhere to related requirements of CSA Z341 and the Provincial Operating Standards when filing supporting information and drilling plans for each well application.

Regarding the abandonment of the existing well Pembina is aware it has to develop a Well Abandonment Program that meets the requirements of CSA Z341 – Section 13.2 Well Abandonment (Abandonment Program). The Abandonment Program has to be filed with and approved by the MNRF².

OEB staff notes that Pembina stated that it would file drilling licence applications with the MNRF either late in the third quarter, or early in the fourth quarter, of 2016. Drilling of the wells is planned to start in the second quarter of 2017 and is expected to last 20 days for each. Pembina plans to start operating the Cavern 45 in late 2017.³

Pembina does not anticipate the need for any additional regulatory approvals beyond those issued by the OEB and MNRF for the development and operation of Cavern 45.

² Pembina's response to OEB staff interrogatory 3 a), June 14, 2016.

³ Pembina's response to OEB staff interrogatory 3 b) and c), June 14, 2016.

Need for the Project

Pembina is a wholly-owned subsidiary and general partner of 1195714 Alberta Ltd. Pembina owns and operates Corruna Facility. A map showing general location of the Corruna Facility within 1.6 km from Dow Moore Pool boundaries is attached in Appendix A.

There are 24 caverns at the Corruna Facility. The 24 caverns were originally drilled and mined for salt by Dow Chemical ULC (Dow) 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 in 2017.

Pembina indicated that 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 staff has no concerns with the need for the Cavern 45 conversion as long as the conversion and operation have no adverse impact on the integrity of the Dow Moore Pool, and on potentially affected landowners.

Consultation with Potentially Affected Parties and Landowner Matters

OEB staff submits it has no concerns with landowner matters related to the development and operation of Cavern 45. Pembina owns the Corruna Facility land and Pembina notified potentially affected adjacent landowners and landowners within Dow Moore Pool. OEB staff notes that no landowner related issues or concerns with the Project were raised in the proceeding⁴.

Pembina filed an affidavit with the OEB, dated March 19, 2015, confirming that it served the Notice as directed by the OEB to all landowners within Enbridge's Dow Moore Pool, Aboriginal groups with any interest in the lands affected by the Project, 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. In addition to the affidavit of service, Pembina included in the application a List of the parties Pembina notified (List) was included in the application. The parties on the List are those served by the Notice. In a letter to the OEB, dated April 29, 2016, Pembina informed the OEB that it informed all the parties in the List about the Additional Evidence and amendment of the application by sending an updated "Project Specific Information Package".

Pembina confirmed that it provided the information about the amended application to all the parties from the List and that, as of April 29, 2016, it did not receive any comments or

⁴ Pembina's response to OEB staff interrogatory 1 e), June 14, 2016.

concerns from the parties. Pembina also stated that it would continue to communicate with the parties throughout the development, construction and operation of the Cavern 45⁵.

OEB staff's view is that Pembina has adequately and timely notified and informed potentially affected parties about the application and the Project. OEB staff notes that, to date, Pembina has not received any concerns regarding the Project.

Aboriginal Consultation

Aamjiwnaang First Nation (AFN) Indian Reserve No. 45 (AFN Reserve) borders the Corruna Facility northern property line along Lasalle Road. Pembina served the AFN with the Notice and informed the AFN about updates in the evidence. The AFN is a registered intervenor in the proceeding but did not actively participate in the discovery process.

In a letter to the OEB, dated May 8, 2015 (Letter) Pembina outlined its consultation with the AFN from October 28, 2014 to May 5, 2015. Pembina indicated, in the Letter, that it 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 Pembina Project activities are located beneath the AFN Reserve. Pembina said that the traffic increase will be minimal and temporary. Other Pembina consultation efforts with the AFN included invitations to open houses, meetings with the AFN Environmental Committee, meeting with Band Council and Chief Plain at AFN, and providing information to the AFN.

Pembina stated it will continue to meet with AFN to address and follow up on any concerns or questions raised by the AFN.⁶

In response to OEB staff interrogatory 1 c), dated June 14, 2016, Pembina indicated 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 concerns with the impacts of the Project.

OEB staff notes that Pembina proactively initiated and maintained communication and consultation with the AFN. OEB staff supports Pembina's commitment⁷ to continue the ongoing communication with the AFN throughout the development, construction and operating phases of the Cavern 45 Project.

In OEB staff's view, Pembina appears to have made adequate attempts to engage with

⁵ Response to OEB staff interrogatories 1 a) and b), dated June 14, 2016.

⁶ Pembina's response to OEB staff interrogatory 5 b), dated May 21, 2015 and OEB staff interrogatory 1 c), dated June 14, 2016.

⁷ Pembina's response to OEB staff interrogatory 1 c), dated June 14, 2016.

affected Aboriginal group and no concerns have been raised. Based on this, OEB staff submits that the duty to consult has been sufficiently discharged for the Project unless any new information is received before the OEB issues its decision.

Impacts on the Integrity and Operations of the adjacent Dow Moore Pool

Enbridge's Position

The Corruna Facility is within 1.6 km radius of Dow Moore Pool which is owned and operated by Enbridge. The proximity exposes Dow Moore Pool to potential impacts of the Corruna Facility of operations on the integrity and operation of gas storage services provided by Dow Moore Pool.

Enbridge is a registered intervenor in the proceeding, however did not actively participate in the discovery process. Enbridge stated in a letter to Pembina, dated October 27, 2014, that it has no objection to the conversion of Cavern 45 on a condition that the development and operations adhere to the current requirements of the CSA Z341. In letters to Pembina, dated February 3, 2015 and February 17, 2015, Enbridge asked to be notified and informed about plans and activities to convert the other 10 suspended use caverns to storage, which are not part of this application.

In response to OEB staff interrogatory 2 d), dated June 14, 2016, Pembina indicated that since September 11, 2015, when the application was placed in abeyance, it communicated with Enbridge by way of telephone, e-mail and meetings. Enbridge and Pembina also discussed the Neighboring Wells Report, and the Project Plan of the Cavern 45 conversion.

OEB staff notes that there seem to be an ongoing communication between Enbridge and Pembina about the Cavern 45 conversion and its potential impacts on the integrity of Dow Moore Pool. OEB staff notes that Enbridge indicated in a letter to Pembina, dated October 27, 2014, that it does not oppose the Project provided that the development and operations of the proposed storage facility adhere to the current requirements of the CSA Z341.

MNRF Role and Position

In Ontario the MNRF is responsible for the technical and safety aspects of storage development and operation. The MNRF ensures the implementation of CSA Z341 and the *Gas and Salt Resources of Ontario, Provincial Operating Standards* (Provincial Standards). CSA Z341 and the Provincial Standards provide a comprehensive framework for monitoring storage operations in Ontario. Development and operation of Pembina's Proposed Project have to fulfill the requirements of the CSA Z341 and the Provincial

Standards to the satisfaction of the MNRF.

The MNRF was not satisfied with originally filed geomechanical and risk assessment evidence. For that reason, the MNRF asked that Pembina file a more complete information related to risk assessment and geomechanical studies to fully adhere to the to the requirements of the following sections of the CSA Z341:

- Section 7.1 Risk Assessment and section 7.2 Assessment of Neighboring Activities; and
- Section 7.3 Geological Studies.

Pembina filed, in the summer of 2015, with the OEB and the MNRF, the following studies as the MNRF requested:

- 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 2016, Pembina filed the following two reports (Updated Reports):

- 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.

In response to OEB staff interrogatory 2 a) and 2 c) Pembina stated that on June 14, 2016, Pembina spoke to the MNRF and that the MNRF confirmed that it had reviewed the Updated Reports.

In OEB staff's submission, the OEB must have positive confirmation from the MNRF on the record of this proceeding that its concerns have been satisfied. The MNRF is the

provincial authority on the CSA Z341, and the OEB needs to be satisfied that any concerns on potential impacts of the Project on integrity of Enbridge's Dow Moore Pool have been addressed.

OEB staff submits that the application for approval to expand the storage capacity should not be approved in the absence of evidence from the MNRF that it is satisfied with the Pembina's evidence on compliance with all applicable CSA Z341 requirements and the Provincial Standards. With this evidence, OEB staff would support Pembina's application with regard to all other issues including the need, landowner matters, consultation with potentially affected parties and the duty to consult.

All of which is respectfully submitted.

Appendix A

Map of the Project
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Pembina Infrastructure and Logistics LP

