



# **Ontario Energy Board Commission de l'énergie de l'Ontario**

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## **DECISION AND ORDER**

**EB-2017-0362**

### **Sarnia Airport Storage Pool LP**

**Application for approval to increase the maximum operating pressure of the Sarnia Airport Natural Gas Storage Pool in the City of Sarnia in the County of Lambton**

**BEFORE: Susan Frank**  
Presiding Member

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**April 26, 2018**

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## 1 INTRODUCTION AND SUMMARY

Sarnia Airport Storage Pool LP (SASP or the Applicant) applied on December 13, 2017 under section 38(1) of the *Ontario Energy Board Act, 1998* (OEB Act)<sup>1</sup> for approval of an increase in the maximum operating pressure of the Sarnia Airport natural gas designated storage pool (Sarnia Pool) to 11,580 kPa, which corresponds to a pressure gradient of 17.2 kPa/m (0.76 psi/ft) (the Project). The Sarnia Pool, located in the City of Sarnia, in Lambton County, has been operated by Union Gas Limited (Union) since 2009. A map with a general location of the Sarnia Pool is attached in Schedule A to this Decision and Order.

The OEB issued a Notice of Hearing on January 31, 2018. The Ministry of Natural Resources and Forestry (MNRF) is the only intervenor in the proceeding. The MNRF is the provincial authority that oversees geological, engineering, operational, technical and safety aspects related to the operating pressure of underground storage. The OEB proceeded by a written process which included written interrogatories and responses, written submissions and a reply submission by the Applicant. The MNRF and OEB staff actively participated in the proceeding.

The OEB approves SASP's request. The OEB finds that the proposed increase in operating pressure is in accordance with Canadian Standards Association (CSA) standard Z341.1-14 - *Storage of Hydrocarbons in Underground Formations* (CSA Z341.1-14) to the satisfaction of the MNRF.

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<sup>1</sup> Section 38(1) is the statutory basis for the OEB to grant authorization to inject, store and withdraw gas from a storage pool.

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## 2 EVIDENCE AND FINDINGS

### Background

In 2008 the OEB granted a number of approvals that enabled operation of the Sarnia Pool.<sup>2</sup> The OEB's order granting the authority to operate the Sarnia Pool contained a condition which reads:

MHP and AltaGas<sup>3</sup> shall not operate the Sarnia Airport Storage Pool above a maximum allowed operating pressure representing a pressure gradient of 15.8 kPa/m of depth to the top of the reservoir and shall not operate the Sarnia Airport Storage Pool at a pressure greater than the discovery pressure of 4,014 kPaa until leave of the Board is obtained.

SASP requested that the OEB allow an increase in the maximum operating pressure and vary the wording of the operating pressure condition as follows:

Sarnia Airport Storage Pool Limited Partnership shall not operate the storage pool above a pressure representing a pressure gradient of 17.2 kPa/m (0.76 psi/f) of depth without leave of the Board. Sarnia Airport Storage Pool Limited Partnership shall provide summaries of an engineering study and geological study in support of any leave application and a formal confirmation from the Ministry of Natural Resources and Forestry that operating the pool at the increased operating pressure complies with the requirements of the CSA Z341 standard.

SASP noted that the increased storage capacity of the Sarnia Pool will be sold as unregulated storage service at market prices. Union contracted to purchase all of the additional incremental capacity at market-based prices. SASP stated in its application that the Project is part of its unregulated storage business and "as such economics have not been completed for the Project" <sup>4</sup>.

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<sup>2</sup> The OEB's Decision and Order (EB-2008-0002) issued on July 28, 2008 and amended on December 24, 2008 approved designation of the Sarnia Pool, well drilling licences recommendations, pipelines construction and authorization to operate the Sarnia Pool.

<sup>3</sup> SASP is a partnership between Market Hub Partners Management Inc. (MHP) and AltaGas Ltd. These entities were applicants in the original proceeding. SASP is an affiliate of Union Gas Limited.

<sup>4</sup> Evidence EB-2017-0362 page 4, paragraph 19.

SASP also stated that there are no environmental impacts resulting from the proposed operating change. SASP confirmed in response to MNRF interrogatory #4 that it submitted all necessary forms to the MNRF related to works on wellheads that are part of the Project.

SASP's evidence is that all of the landowners within the boundaries of the Sarnia Pool are private landowners, and that there are no Indigenous communities with lands or interests in lands within the boundaries of the Sarnia Pool. SASP served the Notice of the Application<sup>5</sup> on all the landowners with properties within the boundaries of the Sarnia Pool and on the local Indigenous communities in the vicinity of the Sarnia Pool. The following Indigenous communities were served the Notice of Hearing and the Application: Caldwell First nation, Oneida Nation of The Thames, Bkejawnog (Walpole Island) First Nation, Aamjiwnaang First Nation, Chippewas of Thames First Nation, and Kettle Stoney Point First Nation. The contacted landowners and Indigenous communities raised no issues or concerns related to the increase in operating pressure of the Sarnia Pool.

## Findings

The key determination in the proceeding is that the proposed increase in operating pressure adheres to the CSA Z341.1-14 requirements and the MNRF's confirmation of its satisfaction that the increase adheres to CSA Z341.1-14.

Union met, on behalf of SASP, with the MNRF's Petroleum Operations Section on October 13, 2017 to discuss the Project. In accordance with the requirements of CSA Z341.1-14, SASP provided the following studies and reports (Sarnia Pool Reports) to the MNRF for review and assessment:

- An Engineering study confirming that the maximum safe operating pressure for the Sarnia Airport Pool exceeds 17.2 kPa/m (0.76 psi/ft) (Engineering Study).

The Engineering Study included engineering and modelling studies assessing the feasibility of increasing the maximum operating pressure in the Sarnia Pool underground reservoir. The Engineering Study concluded that "... a pressure

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<sup>5</sup> Affidavit of Service EB-2017-0362, dated February 14, 2018, Exhibit B

increase to a maximum delta pressure of 0.76 psi/ft (or even 0.80 psi/ft) would be feasible and would not exceed 80% of the fracture gradient in compliance with CSA Z341.1-14.”<sup>6</sup>

- An Assessment of Neighbouring Activities Report as prescribed by CSA Z341.1-14 Clause 7.2 assessing: a) wells within 1 kilometre; b) operations within 5 kilometres; and c) the integrity of all wells penetrating the storage zone (Assessment of Neighbouring Activities Report).

The conclusion of the Assessment of the Neighbouring Activities is that a risk of migration of natural gas between any abandoned or working wells within 1 kilometre and within 5 kilometres of the Sarnia Pool is minimal and that “...the new operating pressure will not compromise the integrity of the Sarnia Airport Pool or any associated facilities”<sup>7</sup>.

- A “What If” Analysis of Hazards and Operability Issues for the Sarnia Airport Pool (“What If” Analysis).

The “What If” Analysis of the Project included assessment and ranking of 126 risk factors of safety, operability and technical integrity within the scope of the CSA Z341.1-14 requirements. That analysis concluded that “...risk rankings, coupled with consideration of the Sarnia Pool Delta Pressuring Project development location, indicate ‘Acceptable Risk’”<sup>8</sup>.

The OEB notes that OEB staff supported the approval of the Application, “Provided that the OEB receives confirmation that the MNRF is satisfied with SASP’s compliance with CSA Z341...”<sup>9</sup>

The OEB notes that the MNRF stated in its written submission that based on the evidence and responses to interrogatories “...MNRF is satisfied with the Application and with the Applicant’s commitment to fully comply with CSA Z341.1-14 with respect to this Application”.<sup>10</sup>

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<sup>6</sup> Evidence EB-2017-0362 Schedule 6, page 4.

<sup>7</sup> Evidence EB-2017-0362 Schedule 6, page 2.

<sup>8</sup> Evidence EB-2017-0362 Schedule 6, page 3.

<sup>9</sup> OEB Staff Submission (EB-2017-0362) dated April 9, 2018, page 6.

<sup>10</sup> MNRF Written Submission (EB-2017-0362) dated April 9, 2018, page 2.

The OEB approves SASP's request to increase the operating pressure of the Sarnia Pool to the pressure corresponding to a pressure gradient of 17.2 kPa/m (0.76 psi/ft). More particularly, the OEB approves the following portion of the condition proposed by SASP:

Sarnia Airport Storage Pool Limited Partnership shall not operate the storage pool above a pressure representing a pressure gradient of 17.2 kPa/m (0.76 psi/f) of depth without leave of the Board.

However, the OEB does not approve the following portion of the condition proposed by SASP:

Sarnia Airport Storage Pool Limited Partnership shall provide summaries of an engineering study and geological study in support of any leave application and a formal confirmation from the Ministry of Natural Resources and Forestry that operating the pool at the increased operating pressure complies with the requirements of the CSA Z341 standard.

The OEB considers it inappropriate to set the requirements for filing evidence in support of any request for a further increase of the maximum operating pressure at this time. The OEB also notes that the form and the scope of the MNRF's formal confirmation that operating the pool at the increased operating pressure complies with the requirements of the CSA Z341.1-14 standard does not have to be set at this time as the future regulatory framework may differ from the current framework. The MNRF expressed a concern in its interrogatories to SASP that the wording of the condition as proposed by SASP leads to "...an abridged process for any future gradient increase request, as set out in the condition request..."<sup>11</sup>. In response to the MNRF's interrogatory, SASP stated that it does not plan to request an increase in the operating pressure beyond 0.76 psi/ft and that it did not request an abridged process for future storage gradient increase requests.<sup>12</sup>

The OEB orders that the original condition, related to the permitted pressure gradient in the OEB's order under section 38(1) in EB-2008-0002, be replaced with the following:

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<sup>11</sup> SASP's response to MNRF Interrogatory no. 3, EB-2017-0362, March 29, 2018.

<sup>12</sup> SASP's response to MNRF Interrogatory no. 3, EB-2017-0362, March 29, 2018.

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Sarnia Airport Storage Pool Limited Partnership shall not operate the storage pool above a pressure representing a pressure gradient of 17.2 kPa/m (0.76 psi/f) of depth without leave of the Board.

**THE BOARD ORDERS THAT:**

1. Sarnia Airport Storage Pool Limited Partnership may increase the operating pressure of the Sarnia Airport storage pool to a pressure representing a pressure gradient of 17.2 kPa/m (0.76 psi/f) of depth.
2. Sarnia Airport Storage Pool Limited Partnership shall not operate the storage pool above a pressure representing a pressure gradient of 17.2 kPa/m (0.76 psi/f) of depth without leave of the Board.
3. Sarnia Airport Storage Pool Limited Partnership shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.

**DATED** at Toronto April 26, 2018

**ONTARIO ENERGY BOARD**

*Original signed by*

Kirsten Walli  
Board Secretary

**SCHEDULE A**

**DECISION AND ORDER**

**Sarnia Airport Storage Pool LP**

**MAP OF THE GENERAL LOCATION OF THE SARNIA POOL**

**EB-2017-0362**

**APRIL 26, 2018**



