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**VIA Email and RESS**

June 1, 2021

Ms. Christine Long  
Registrar  
Ontario Energy Board  
2300 Yonge Street, Suite 2700  
Toronto, Ontario, M4P 1E4

Dear Ms. Long:

**Re: Enbridge Gas Inc. ("Enbridge Gas")  
Ontario Energy Board ("Board") File No.: EB-2017-0354  
Dow-Moore Storage Pool Welling Drilling Project ("Project")**

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On February 21, 2019 the OEB issued its Report to the Minister of Natural Resources and Forestry ("OEB Report") recommending the issuance of a well drilling license to Enbridge Gas for wells TD26, TD27, TD28H, and TD29H.

As required under the OEB Report Appendix A – Proposed Conditions of License – Well Drilling and Operations, Sections 6. and 8. b), enclosed are the Post Construction Financial and Final Monitoring reports Report including the Senior Executive Certification. These reports are to be filed no later than fifteen months after the in-service date, or where the deadline falls between December 1 and May 31, the following June 1.

Please contact me if you have any questions.

Yours truly,

Alison Evans  
Advisor Regulatory Applications  
Regulatory Applications & Strategy

# Enbridge Gas Inc.

**EB-2017-0354**

**TECUMSEH GAS STORAGE WELLS TD26, TD27, TD28H and TD29H**

June 1, 2021

## Post-Construction Final Monitoring Report

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Company: Enbridge Gas Inc.

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## Introduction

On October 26, 2018, Enbridge Gas Inc. (formerly Enbridge Gas Distribution Inc. [Enbridge Gas]) applied to the Ontario Energy Board (OEB) for a well drilling license in the Dow Moore Storage Pool for two observation wells (TD26 and TD27) and two horizontal gas storage wells (TD28H and TD29H) (the Project). The observation wells (TD 26 and TD27) are required to monitor the gas content and pressure in the underground geological formations. The two horizontal gas storage wells (TD28H and TD29H) will replace deliverability lost due to the previous abandonment of five gas storage wells and one observation well, and the conversion of one gas storage well to an observation well.

On February 21, 2019, the OEB issued *EB-2017-0354 Report of the Ontario Energy Board to the Minister of Natural Resources and Forestry* (the Report) which recommended granting a well drilling license in the Dow Moore Storage Pool for TD26, TD27, TD28H and TD29H.

This is the Post-Construction Final Monitoring Report (Final Report) for all drilling activities for the Project.

Prior to the OEB's recommendation to the Ministry of Natural Resources and Forestry (MNRF), Enbridge Gas retained Stantec Consulting Limited (Stantec) to conduct the studies listed in Table 1 to identify the potential for construction impacts and to develop appropriate mitigation measures to minimize environmental and socio-economic impacts.

**Table 1: Studies Completed for the Project.**

REPORT TITLE	CONDUCTED BY	DATE
Dow Moore, Corunna and Seckerton Pipeline Project, Environmental Report	Stantec Consulting Limited	November 2010
A-1 Observation Well: Environmental Screening Report	Stantec Consulting Limited	April 13, 2017
28H and 29H Horizontal Well Development: Environmental Screening Report	Stantec Consulting Limited	December 6, 2017
TD27H Observational Well Development: Environmental Screening Report	Stantec Consulting Limited	September 28, 2018
Stage 1-2 Archaeological Assessment: Enbridge Dow Moore Pool A-1 Observation Well	Stantec Consulting Limited	September 21, 2016
Stage 1-2 Archaeological Assessment: Enbridge Dow Moore Designated Storage Area, TD28H and TD29H Horizontal Well Development	Stantec Consulting Limited	December 6, 2017
Stage 1-2 Archaeological Assessment: Enbridge Dow-Moore Designated Storage Area, TD27 Horizontal Well Development	Stantec Consulting Limited	September 7, 2018
Letter: Dow Wells 28H and 29H – Background Species at Risk Request and Mitigation Measures for Butler’s Gartersnake	Stantec Consulting Limited	November 10, 2017

Letter: Enbridge A-1 Observation Well – Construction Mitigation Plan	Stantec Consulting Limited	October 25, 2016
Letter: Dow Wells 27, 28H, and 29H – Letter of Advice Amendment	Stantec Consulting Limited	September 6, 2018
Sound & Vibration Monitoring of Enbridge Gas Inc. Natural Gas Well Drilling St. Clair Township, Ontario	ORTECH Consulting Inc.	August 6, 2019

Table 2 below provides an overview of the construction start and end dates as well as the in-service dates for each of the wells.

**Table 2: Key Construction Dates for the Project**

TECUMSEH GAS STORAGE WELL	CONSTRUCTION START DATE	CONSTRUCTION END DATE	IN-SERVICE DATE
<b>TD26</b>	April 15, 2019	May 30, 2019	October 7, 2019
<b>TD27</b>	July 1, 2019	July 13, 2019	August 2, 2019
<b>TD28H</b>	May 3, 2019	May 26, 2019	August 12, 2019
<b>TD29H</b>	May 28, 2019	June 29, 2019	July 18, 2019

This Final Report has been prepared in accordance with the Conditions of License (COL) set out in the Report. Specifically, this Final Report addresses Condition 8 b. of the COL as set out below:

8. *Both during and after construction, Enbridge shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:*

- b. *A Final Monitoring Report, no later than fifteen months after the inservice date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:*
- i. Provide a certification, by a senior executive of the company, of Enbridge' adherence to Condition 1;*
  - ii. Describe the condition of any rehabilitated land;*
  - iii. Describe the effectiveness of any actions taken to prevent or mitigate any identified impacts during construction;*
  - iv. Include the results of analyses and monitoring programs and any recommendations arising therefrom; and*
  - v. Include a log of all complaints received by Enbridge, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.*

Executive certifications required by COL 8. b. i. can be found in Appendix C.

This report is limited to items that have been identified since the submission of the interim post-construction report (Interim Report) on January 2, 2020 and prior to completion of this report. This report summarizes final restoration activities and addresses any outstanding issues if identified.

## Project Description

The Project involved drilling two observation wells (TD26 and TD27) and two horizontal gas storage wells (TD28H and TD29H) (the Project). The observation wells (TD 26 and TD27) are required to monitor the gas content and pressure in the underground geological formations. The two horizontal gas storage wells (TD28H and TD29H) will replace deliverability lost due to the previous abandonment of five gas storage wells and one observation well, and the conversion of one gas storage well to an observation well.

Appendix A shows the horizontal and observation wells within a regional context.

## Environmental Inspection

The scope of Environmental Inspection as part of the Project was described in the Interim Report filed with the OEB on January 2, 2020.

## Construction Effects and Mitigation Measures

Mitigation measures which were implemented to minimize the potential environmental effects from the construction of the Project are documented in the Interim Report filed with the OEB on January 2, 2020.

On January 9, 2020, Enbridge received a request from the OEB for additional information related to soybean cyst nematode (SCN) laboratory testing and the management of residual solidified drilling fluid. Enbridge responded to this request on January 27, 2020.<sup>1</sup>

All activities were conducted in adherence to the contract documentation, Enbridge Construction Policies and Procedures as well as applicable reports documented in Table 1.

Photos of the Project taken April 6, 2021 are found in Appendix B.

## Residual Issues

Overall, construction activities were carried out with a high level of respect for the environment. It was documented in the Interim Report that site restoration was still to occur at observation well TD26. This restoration has now been completed, as shown in the Photo Log in Appendix B.

There is residual gravel left on site at TD27 (as shown in Figure 7) from restoration of the drill pads. This gravel will be utilized for future drill pad/access road construction and is not specific to TD27. Enbridge Gas owns the land where TD27 is situated.

There are no unresolved issues for the Project.

## Comments and Complaints

No comments or complaints regarding TD27, TD26, TD28H and TD29H were received during the construction of the Project.

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<sup>1</sup> Please refer to the letter dated January 27, 2020.

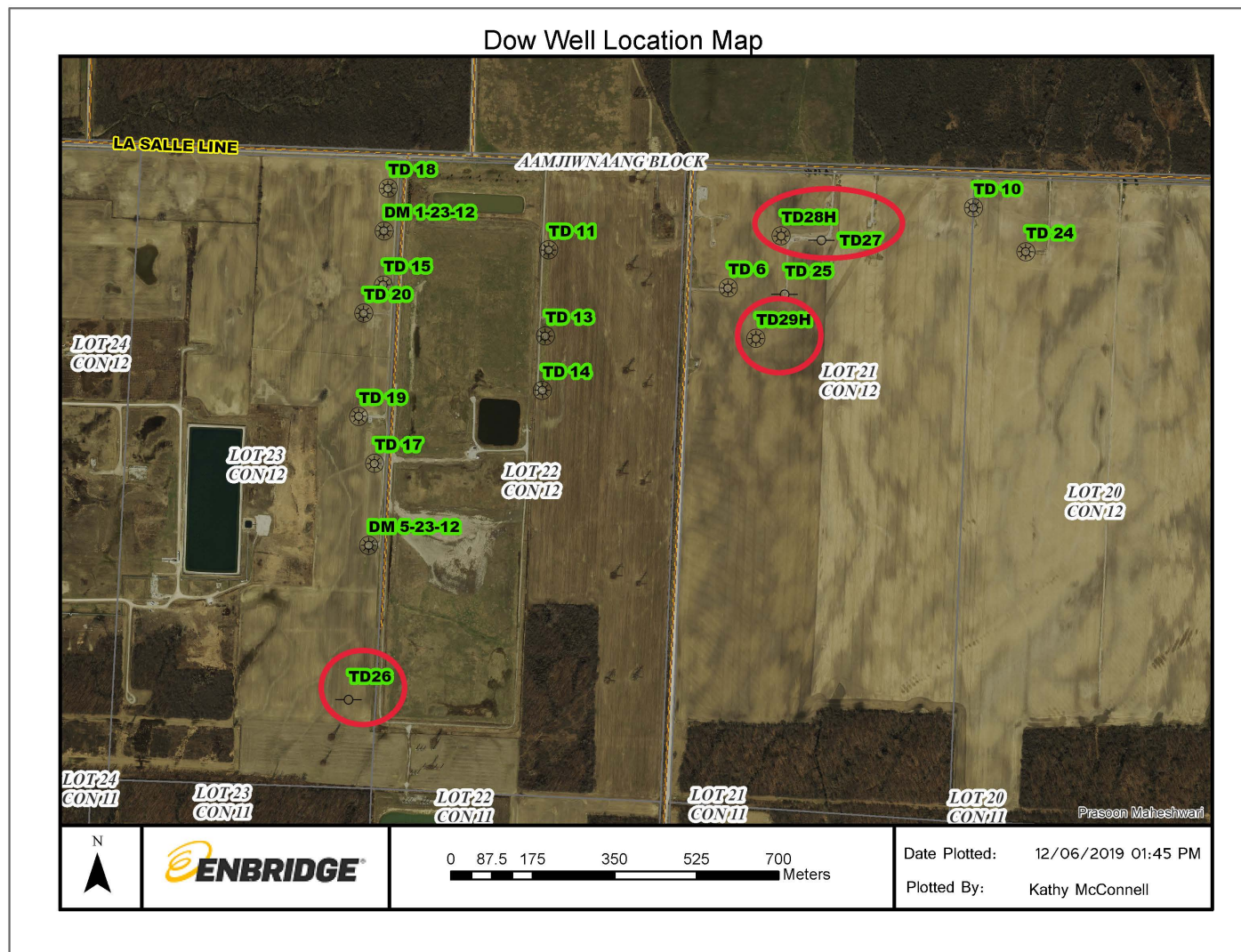


## Summary

This Final Report has been prepared in accordance with the COL set out in the Report (February 21, 2019) and documents the final conditions after construction and restoration activities were completed as part of the Project. Measures implemented during construction and site restoration activities have been successful

## Appendix A

### STORAGE WELL LOCATION MAP



**Figure 1: Location Map of Gas Storage Wells TD26, TD27, TD28H and TD29H**

## Appendix B

### PHOTO LOG





**Figure 2: TD26 looking North**



**Figure 3: TD26 looking West**





**Figure 4: TD26 looking East**



**Figure 5: TD26 looking South**





**Figure 6: TD27 looking North**



**Figure 7: TD27 looking West**





**Figure 8: TD27 looking East**



**Figure 9: TD27 looking South**





**Figure 10: TD28H looking North**



**Figure 11: TD28H looking West**





**Figure 12: TD28H looking East**



**Figure 13: TD28H looking South**





**Figure 14: TD29H looking North**



**Figure 15: TD29H looking West**





**Figure 16: TD29H looking East**



**Figure 17: TD29H looking South**

## Appendix C

### EXECUTIVE CERTIFICATE

**Dow Moore Storage Pool Drilling Project  
EB-2017-0354  
Report of the Board  
February 21, 2019**

I hereby certify that Enbridge Gas Inc. ("Enbridge") has complied with the OEB's Decision and Order in EB-2017-0354, Appendix A, Condition 8. b).

\_\_\_\_\_  
May 25, 2021

Date

\_\_\_\_\_  
*Jim Redford*

Jim Redford  
Vice President, Energy Services  
Enbridge Gas Inc.

Condition 8.

*Both during and after construction, Enbridge shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:*

- b) a final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and the following May 31, the following June 1, which shall:*
  - i. provide a certification, by a senior executive of the company, of Enbridge's adherence to Condition 1;*
  - ii. describe the condition of any rehabilitated land;*
  - iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction;*
  - iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and*
  - v. include a log of all complaints received by Enbridge, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.*

Condition 1.

*Enbridge Gas Inc. (Enbridge) shall rely on the evidence filed with the OEB in EB-2017-0354 proceeding and comply with applicable laws, regulations and codes pertaining to the construction of the proposed wells.*

POST CONSTRUCTION FINANCIAL REPORT  
DOW-MOORE STORAGE POOL WELL DRILLING PROJECT

1. In compliance with Condition No. 6 of the Ontario Energy Board's ("OEB") Proposed Conditions of License included in its February 21, 2019 Report to the Minister of Natural Resources and Forestry ("MNRF") regarding the application of Enbridge Gas Inc. ("Enbridge Gas") to drill wells in the Dow-Moore Storage Pool ("Report") (EB-2017-0354), Table 1 below summarizes the capital costs (pre-spend, estimated, and actual) for the Project and provides variance explanations.

2. As discussed by the OEB in its Report to the MNRF,

The two new horizontal wells will form part of Enbridge's regulated storage operations and the abandoned and converted wells are a part of regulated storage assets...The capital costs will be capitalized and included in rate base...There is not anticipated to be a rate impact to Enbridge customers from the drilling of the wells until the costs are included in rate base in 2024.<sup>1</sup>

3. As set out in Table 1, actual Project costs were \$10,185,186 compared to the projected/estimated Project cost of \$8,877,796 resulting in a capital cost variance of \$1,307,390 (15%). In addition, Enbridge Gas has included certain pre-spend Project costs that were not included in its original application.

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<sup>1</sup> Report, p. 3.

**Table 1: Capital Costs of Dow-Moore Storage Pool Project**

	<b>Pre-spend <sup>(1)</sup> Project Costs (2016 to 2018)</b>	<b>Estimated Project Costs (Exhibit D, Tab 1, Schedule 1)</b>	<b>Total Estimated Project Costs</b>	<b>Actual Project Costs</b>	<b>Variance</b>	
	<b>\$ a</b>	<b>\$ b</b>	<b>\$ a + b = c</b>	<b>\$ d</b>	<b>\$ (d - c)</b>	<b>% (c ÷ d)</b>
<b>TD 26 – A-1 Observation Well <sup>(2)</sup></b>	\$ 212,040	\$ 1,363,900	\$ 1,575,940	\$ 2,531,889	\$ 955,949	61%
<b>TD 27 – Guelph Observation Well <sup>(3)</sup></b>	\$ 0	\$ 1,534,100	\$ 1,534,100	\$ 1,249,532	\$ (284,568)	(19)%
<b>TD 28H – Horizontal Storage Well <sup>(4)</sup></b>	\$ 1,076,631	\$ 1,800,000	\$ 2,876,631	\$ 3,049,308	\$ 172,677	6%
<b>TD 29H – Horizontal Storage Well <sup>(5)</sup></b>	\$ 1,015,225	\$ 1,875,900	\$ 2,891,125	\$ 3,354,457	\$ 463,332	16%
<b>Total Project Capital Costs</b>	<b>\$ 2,303,896</b>	<b>\$ 6,573,900</b>	<b>\$ 8,877,796</b>	<b>\$ 10,185,186</b>	<b>\$ 1,307,390</b>	<b>15%</b>

### Variance Discussion Notes:

#### (1) Pre-spend Project Costs (2016-2018)

The Estimated Project Costs set out in Enbridge Gas's application and pre-filed evidence,<sup>2</sup> excluded Pre-spend Project Costs incurred from 2016 to 2018. As part of its 2024 Rebasng application, Enbridge Gas expects that it will seek to recover all prudently incurred Project costs from ratepayers (both Pre-spend and Estimated Project costs). Accordingly, the Total Estimated Project Costs include Pre-spend and Estimated Project costs (columns a and b) compared to Actual Project Costs (column d) to calculate the respective Variance (\$ and %) for each aspect of the Project.

#### (2) TD 26 – A1 Observation Well Variance

Costs (i.e. fuel, labour and daily drilling costs) for the drilling of TD 26 were higher than original estimates due to the need to utilize a smaller diameter wellbore and a drilling rig capable of handling smaller diameter drill pipe (Enbridge Gas originally intended to utilize a single drilling rig for all wellbores). The purchase price for gravel required to build the drill pad and laneway

<sup>2</sup> Exhibit D, Tab 1, Schedule 1.



(as well as the required length of laneway) was also higher than estimated.

(3) TD 27 – Guelph Observation Well

Costs for the drilling of TD 27 were lower than original estimates due to reduced material costs.

(4) TD 28H – Horizontal Storage Well

Costs (i.e. fuel, labour and daily drilling costs) for the drilling of TD 28H were higher than original estimates due to the need to utilize a snubbing unit to safely remove the drill string from the well. The purchase price for gravel required to build the drill pad and laneway was also higher than estimated.

(5) TD 29H – Horizontal Storage Well

Costs (i.e. fuel, labour and daily drilling costs) for the drilling of TD 29H were higher than original estimates due to the need to strand approximately 61 metres of drilling tools in the initial well that was drilled. After several failed attempts to recover those drilling tools, a portion of the original well was abandoned and subsequently re-drilled. The purchase price for gravel required to build the drill pad and laneway was also higher than estimated.