Enbridge Gas Distribution 500 Consumers Road North York, Ontario M2J 1P8 Canada



#### VIA RESS, EMAIL and COURIER

March 15, 2018

Ms. Kirsten Walli Board Secretary Ontario Energy Board 2300 Yonge Street, Suite 2700 Toronto, ON M4P 1E4

Re: Enbridge Gas Distribution Inc. ("Enbridge")

EB-2016-0378 – TC9H – well Horiz.#2 Moore 4-2-10 Conditions of Approval – Post Construction Report

In the Ontario Energy Board's Decision and Order issued on May 4, 2017, the Conditions of Approval requires Enbridge to file a Post Construction Report for the project 3 months of the in-service date which shall also include certification by a senior executive of the company.

The final in-service date was December 14, 2017, and requires Enbridge to file the Post Construction Report by March, 2018.

Enclosed please find the Post Construction Report and executed certificate for this project.

Further to the above noted submission, contained within the filing is the following redacted information:

Landowner Comments and Complaints – Table 2

A Confidential copy will be provided to the Board under separate cover in accordance with the Board's revised Practice Direction on Confidential Filings, effective October 28, 2016.

Any future developments will be communicated to the Board.

Please contact the undersigned if you have any questions.

Yours truly,

(Original Signed)

Stephanie Allman Regulatory Coordinator

cc: Ms. Zora Cronojacki, OPCC Chair (via email)
Ceiran Bishop, Manager Supply and Infrastructure Applications Division (via email)

# **Enbridge Gas Distribution Inc.**

TECUMSEH GAS STORAGE WELL TC9H/TC9 H2 March 15, 2018

# **Post-Construction Report**

Company: Enbridge Gas Distribution Inc.





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#### Introduction

On March 10, 2016, under docket number EB-2015-0303, the Ontario Energy Board ("OEB") recommended to the Ministry of Natural Resources and Forestry ("MNRF") the granting a well drilling license in the Corunna Designated Storage Area ("DSA") for one horizontal Injection/Withdrawal ("I/W") well (identified as TC9H). After drilling TC9H, it was determined that the well did not provide the needed deliverability as a result of not reaching the porosity zone expected from seismic analysis. Further analysis indicated that drilling a second leg would be required. Well TC9H was not connected to the gathering system.

On May 4, 2017, the OEB issued the *EB-2016-0378 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 Corunna DSA for the second leg in well TC9H – well Horiz.#2 Moore 4-2-10 or TC9 H2- to the MNRF. This is the post construction report for all drilling activities for gas storage well TC9H/TC9 H2. This post construction report has been prepared in accordance with the Conditions of Licence set out in the Report. Specifically this post construction report addresses Condition 5 a. of the Conditions of Licence as set out below:

- 5. 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:
  - a. A post construction report, within three months of the in-service date, which shall:
    - i. provide a certification, by a senior executive of the company, of Enbridge's adherence to Condition 1;
    - ii. describe any impacts and outstanding concerns identified during construction;
    - iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction:
    - iv. 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; and
    - v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.

Certification per Conditions 5. a. i. and 5. a. v. can be found in Appendix C.

Prior to the OEB's recommendation to the MNRF, Enbridge retained Stantec Consulting Limited ("Stantec") to conduct the following studies to identify the potential for construction impacts and to develop appropriate mitigation measures to minimize environmental and socio-economic impacts.



Report Title	Conducted by:	<u>Date</u>
Dow Moore, Corunna and Seckerton Pipeline Project, Environmental Report	Stantec Consulting Limited	November 2010
NEXUS Pipeline Project – Corunna Gathering Pipeline Environmental Screening Report	Stantec Consulting Limited	April 2011
Project NEXUS Phase 1 Environmental Protection Plan – REV2	Stantec Consulting Limited	June 2011
Letter: Attention: Ministry of Natural Resources Reference: Permit AY-B-011-11 under Section 17(2)(b) of the Endangered Species Act, 2007 for Butler's Garter Snake Surveys for the Dow Moore, Corunna, Seckerton Pipeline Follow-up Report	Stantec Consulting Limited	August 9, 2011
Corunna 3 Horizontal Well and Pipeline: Environmental Screening Report	Stantec Consulting Limited	December 3, 2015
Letter: Attention: Ms. Kathy McConnell, Manager Reservoir Development Reference: Review of Water Supply Wells Corunna Natural Gas Storage Pool, Lambton County	Stantec Consulting Limited	January 11, 2016

Drilling of TC9H began on May 17, 2016 and was completed on June 21, 2016, however, was not connected to the gathering system due to the reasons mentioned above.

Drilling of TC9 H2 began on May 10, 2017 and was completed on May 19, 2017. TC9 H2 was put into service on December 14, 2017.

This report is limited to items that have been identified prior to February 27, 2018. Items addressed after this date will be identified in the final monitoring report. This report will summarize actual construction procedures and identify any significant deviations from proposed construction activities.

## **Project Description**

Gas storage well TC9H/TC9 H2 is a horizontal I/W well drilled to replace lost deliverability due to the abandonment of two gas storage wells and the conversion of one gas storage well in the Corunna Pool DSA to an observation well. The Corunna DSA is located on Lots 18 to 20, Concession 10 and 11, St. Clair Township, County of Lambton, Ontario. Storage well TC9H/TC9 H2 is located on the east side of



Lot 20, southwest of the intersection of Petrolia Line and Tecumseh Road. TC9 H2 was drilled in the same location as TC9H, therefore, had the same construction/operational footprint.

Appendix A shows the storage well within a regional context.

## **Environmental Inspection**

In adherence to Section 5.a.iii. of the Conditions of Licence, Species at Risk ("SAR") awareness training was conducted as part of the Site Specific Safety Orientation. Based on the findings in *Corunna 3 Horizontal Well and Pipeline: Environmental Screening Report* completed by Stantec,, SAR habitat was not present in the work area and therefore SAR sightings were not anticipated, however, as a precautionary measure this training was implemented. In addition, a Project Manager was available for the duration of the project and a full time Wellsite Supervisor was onsite during construction.

The Project Manager was responsible for:

- providing advice regarding adherence to environmental specifications and commitments made in the previously mentioned documents and to regulatory agencies, including the OEB;
- acting as a liaison with environmental regulators, government agencies and interest groups;

The Wellsite Supervisor was responsible for:

- providing advice to the Project Manager and all construction personnel regarding compliance with environmental legislation, regulations and industry standards;
- providing immediate advice regarding spill prevention and contingency (if necessary);
- coordinating appropriate disposal of any non-hazardous and liquid industrial construction wastes;
   and
- providing oversight for SAR mitigation.

# **Construction Effects and Mitigation Measures**

In adherence to Section 5.a.iii. of the Conditions of Licence, construction effects and mitigation measures which were implemented to minimize the potential effects from installation of gas storage well TC9H/TC9 H2 are summarized in Table 1. Photos of TC9H/TC9 H2 taken on February 27, 2018 and are found in Appendix B. All activities were conducted in adherence to the contract documentation and Enbridge Construction Policies and Procedures.



# Table 1 Construction Effects and Mitigation Measures

ACTIVITY	DURATION	POTENTIAL EFFECT(S)	MITIGATION MEASURES
Work on and removal of Vegetative Cover/Agricultural Crops	Throughout Construction	Permanent removal of vegetation. Aesthetic degradation. Changes in surface drainage patterns affecting amount of water available. Changes to sunlight or wind exposure regimes. Increased potential of erosion and sedimentation.	Limits of work area marked to minimize encroachment into vegetated / crop areas. An all-weather road and drill pad was constructed to limit disturbance outside work area.  Erosion and sediment control measures installed, as needed.
Topsoil Handling	Throughout Construction	Disruption of surface and subsurface soils. Soil mixing may result in loss of productivity.  Spreading of Soybean Cyst Nematode (SCN).	Contractor stripped topsoil and stockpiled separately from subsoil. Mixing of soils was minimized. Segregated topsoil was replaced on surface following construction. Topsoil was tilled prior to cultivation.  Laboratory analysis for SCN was completed prior to construction on fields within the work area. Fields outside the work area were not sampled as soil and machinery movement would not occur between properties. SCN results were negative.
Drilling in Bedrock	Throughout Construction	Large amounts of drill cuttings and fluids are encountered and removed from the drill hole. Rock materials in drill cuttings are mostly limestone and dolomite	Drill fluids were collected in holding tanks and allowed to settle. Fluid was recycled and used again. Remaining fluid and drill cuttings were



ACTIVITY	DURATION	POTENTIAL EFFECT(S)	MITIGATION MEASURES
		with some shale and salt.	solidified with a bonding agent and disposed of offsite according to Ministry of Environment and Climate Change (MOECC) and MNRF Regulations.
Agricultural Drainage (Tile)	Throughout construction	Interruption to subsurface drainage during and after pipeline construction.	Agricultural tile was encountered and rerouted for the duration of the drilling. The tile was repaired to the satisfaction of the Landowner.
Climate	Throughout Construction	Heavy rainfall may result in flooding of adjacent lands, erosion and compaction and rutting (if construction persists). High winds may erode loose soil material, including topsoil and create nuisance dust.	During wet soil conditions construction on agricultural lands were suspended. Work resumed only upon approval by the Project Manager. Nuisance dust was controlled by applying water to work area (if required). An all-weather road and drill pad was constructed to reduce nuisance dust.
Groundwater	Throughout Construction	During well drilling the water table may be breached and the supply of water to adjacent water wells be affected temporarily.	A baseline water well survey was completed within a 1km radius of the project area. No active water wells were identified.
Noise	Throughout Construction	Disturbances to sensitive receptors (i.e. residents).	Construction equipment conformed to Ministry of Labour guidelines for sound levels. No noise complaints were received during construction.



ACTIVITY	DURATION	POTENTIAL EFFECT(S)	MITIGATION MEASURES
Spills	Throughout Construction	Contamination of air, soil, surface water or ground water. Inconvenience to landowners and public.	As required, contractor had spill containment kits at the project site. No spills were identified during construction.
Species at Risk (SAR) Habitat	Throughout Construction	Disruption to Species at Risk Habitat.	No species were expected to occur in work area due to lack of suitable habitat.  No SAR were encountered for the duration of construction.
Site Rehabilitation	Throughout Construction	Restores the storage well easement to preconstruction conditions.	Restoration activities were conducted to restore the site to as close to preconstruction condition as possible and in compliance with Section 11.13 of the OGSRA Operating Standards v.2.
TC9H/TC9 H2 Well System Energizing	December 14, 2017	Inconvenience and/or nuisance to nearby landowners and the public. Gas release to atmosphere.	Energizing was completed in accordance with Enbridge Policies and Procedures to ensure efficiencies and minimize period of gas release.

## **Residual Issues**

Overall, construction activities were carried out with a high level of respect for the environment.

As of February 27, 2018, there remains a small area of exposed soils surrounding TC9H/TC9 H2. Enbridge will arrange with the tenant farmer to plant a cover crop, such as wheat or rye grass, over these areas.



# **Landowner Comments and Complaints**

One landowner comment associated with the construction of TC9H was received. Comment details can be found in Table 2 below.

No landowner comments were received during the construction of TC9 H2.

Table 2
Landowner Comments/Complaints

DATE	TIME	NAME OF CALLER	CONCERN	RESOLUTION	COMMENTS
April 5, 2016	11:42 am		Inquired about the property of the drill site, the type of well being drilled, the direction of the well being drilled and whether or not existing driveways would be used to enter the property.	Enbridge provided the following response: - Stated the property is owned by - a new horizontal well was being drilled and this well would be going North; and - the existing driveway would be used to enter the property.	thanked Enbridge for the information.

## **Summary**

This post-construction report has been prepared in accordance with the Conditions of Licence (May 4, 2017) set out in the Report. It documents construction and restoration activities completed as part of the drilling operation for gas storage well TC9H/TC9 H2. In general, measures implemented during construction and site restoration have been successful. A final monitoring report will be prepared by June 1, 2019. This report will document any further restoration activities as needed, and address additional issues that may arise.



# **Appendix A**

STORAGE WELL LOCATION MAP



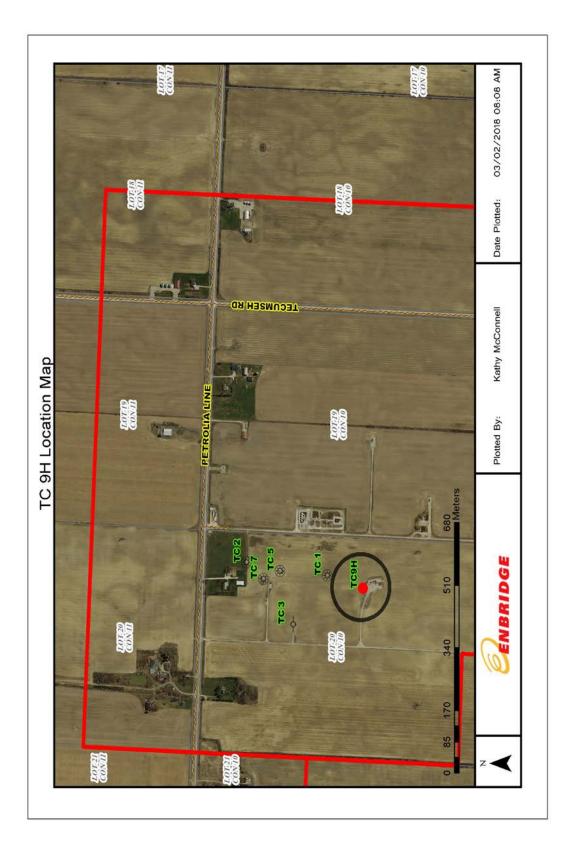


Figure 1: Location Map of Gas Storage Well TC9H/TC9 H2

Enbridge Gas Distribution Inc.



**Appendix B** 

**PHOTO LOG** 



Figure 1: View looking north at the South Side of TC9H/TC9 H2

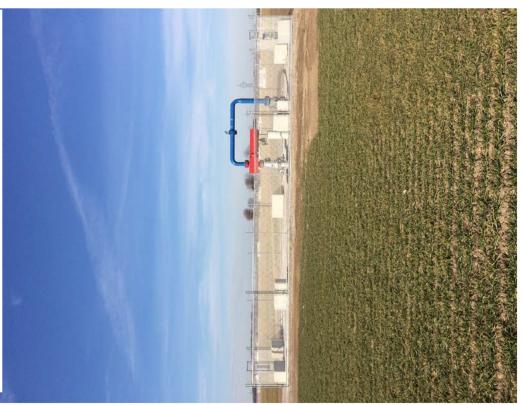


Figure 2: View looking South at the North Side of TC9H/TC9 H2

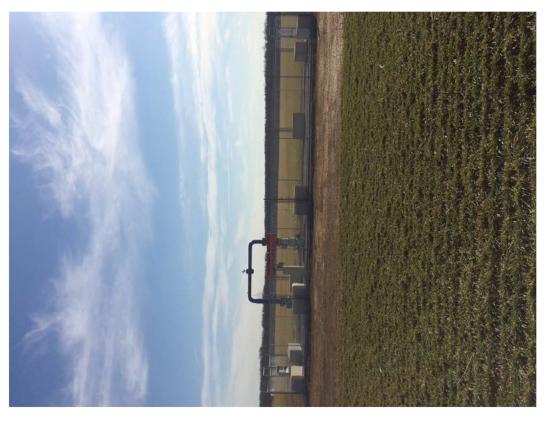




Figure 3: View looking west at the east side of TC9H/TC9 H2

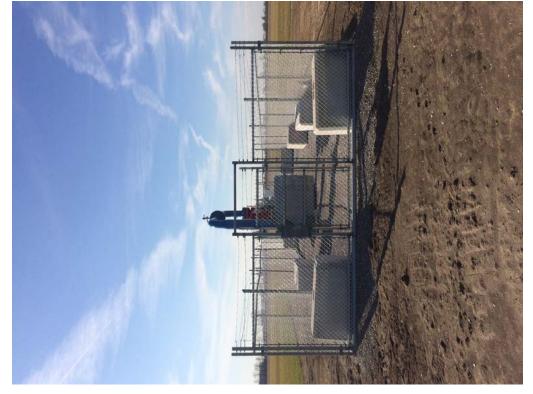


Figure 4: View looking east at the west Side of TC9H/TC9 H2



#### Enbridge Gas Distribution Inc. Officer's Certificate

Re: EB-2016-0378 Report of the Ontario Energy Board to the Minister of Natural Resources and Forestry ("Report")

To: The Ontario Energy Board

1. Kerry Lakatos - Hayward of the City of Toronto, in the Province of Ontario, acting in my position as a senior executive of Enbridge Gas Distribution Inc. (EGD) and not in my personal capacity, to the best of my knowledge do hereby certify as follows:

- My position with EGD is Director, Energy Suply 3 and as such I have 1. personal knowledge of, or have conducted due inquiry of individuals who have personal knowledge of, the facts and matters herein stated.
- 2. In relation to the construction of the proposed wells, EGD has relied on the evidence filed in the EB-2016-0378 proceeding and complied with applicable laws, regulations and codes.
- 3. EGD has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed wells.

Name: Kerry Lawards Hayward

Title: Director, Energy Supply 3 Gas
Storage

Date: March 8th 2018