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May 27, 2014

#### **VIA COURIER AND EMAIL**

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

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

EB-2012-0013 Angus Reinforcement Pipeline Project Conditions of Approval - Final Monitoring Report

In the Ontario Energy Board's (the "Board") Decision issued on June 21, 2012, the Conditions of Approval required Enbridge to file the Final Monitoring Report for the project 15 months after the in-service date. The final in-service date for the Angus Reinforcement Pipeline Project was February 20, 2013 which requires Enbridge to file the Final Monitoring Report by May 20, 2014.

On April 9, 2014, Enbridge filed a letter with the Board requesting an extension to the submission date for the final monitoring report for the project until June 30, 2014. Due to the extraordinary winter many of the areas at that time were still covered in snow when we were attempting to access the area for inspection.

Enbridge has completed the assessment of the area and enclosed please find the final monitoring report for the project.

If you have any questions, please contact the undersigned.

Yours truly,

(Original Signed)

Bonnie Jean Adams Regulatory Coordinator

cc: Zora Crnojacki, OPCC Chair Pascale Duguay, Manager, Facilities Applications, Ontario Energy Board (via courier and email)

# ENBRIDGE GAS DISTRIBUTION INC. POST-CONSTRUCTION ENVIRONMENTAL MONITORING REPORT NO.2

ANGUS REINFORCEMENT PIPELINE PROJECT EB-2012-0013

Prepared by Enbridge Gas Distribution Inc. May 27, 2014

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#### 1.0 Introduction

In June of 2012 the Ontario Energy Board ("Board") under docket number EB-2012-0013 granted Enbridge Gas Distribution Inc. ("Enbridge") Leave to Construct and operate an nominal pipe size (NPS) 6 (6-inch outer diameter) natural gas pipeline to reinforce the existing natural gas distribution network in Angus and surrounding communities. Prior and subsequent to obtaining approval, Enbridge conducted the following studies to select a pipeline route, identify potential impacts resulting from construction, and prepare mitigative measures to minimize environmental and socioeconomic impacts.

Report Title	Conducted by:	<u>Date</u>
Pipeline to Reinforce the Natural	Stantec Consulting Limited	December 2011
Gas Distribution Network in the		
Vicinity of Angus		
STAGE 1 ARCHAEOLOGICAL	Stantec Consulting Limited	November 2011
ASSESSMENT		
Pipeline to Reinforce the Town of		
Angus, Ontario		
Lots 14, 15, 16, 17 in Concession 4,		
5, 6, 7, 8, 9, 10, 11, Essa Township		
STAGE 2 ARCHAEOLOGICAL	Stantec Consulting Limited	April 2012
ASSESSMENT		
Pipeline to Reinforce the Town of		
Angus, Ontario		
Lot 16 Concessions 4, 5, 6, 7, 8, 9,		
10, 11, Essa Township		
Final Report Geotechnical Investigation	Stantec Consulting Limited	July 2012
Pipeline to Reinforce the Natural Gas		
Distribution Network in the Vicinity of Angus		
Country Road 21 and TransCanada Trail		
between Baxter and Thornton, ON		

Construction of the Angus Reinforcement Pipeline Project began on October 26, 2012 and was completed and energized on February 20, 2013.

This report has been prepared in accordance with the Board's EB-2012-0013 Board Staff Proposed Conditions of Approval as described below:

- 3.1 Both during and after construction, Enbridge shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Enbridge shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying each action.
- 3.2 The interim monitoring report shall confirm Enbridge adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.
- 3.3 The final monitoring report shall describe the condition of any rehabilitated land and the effectiveness of the mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and any recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

This report is limited to items that have been identified prior to May 8, 2014. Prior to construction there were many activities conducted related to this pipeline project, including environmental assessments, public meetings, archaeological assessments, Board hearings, and background studies. This report will not review all these items in detail, but will summarize that all disturbed or impacted areas due to construction activities will be revisited to ensure they are restored to their original state or better and that Enbridge does not foresee any future issues related to this construction.

#### 2.0 Project Description

The pipeline project was constructed to reinforce the existing Angus natural gas distribution network (please see map on page 8 for pipe location). The reinforcement is necessary to meet the needs of residential, commercial and industrial customers in the Township of Essa and surrounding area.

The pipeline originates at the Enbridge Thornton Gate Station located at 4118 Innisfil Beach Road, Town of Innisfil, Ontario. The pipeline proceeds west along Innisfil Beach Road where it crosses County Road 27 (Barrie Street). It then heads south along County Road 27 to the Trans Canada Trail and heads southwest along the Trans Canada Trail. It then turns west onto County Road 21 (Robert Street) and continues on this road (which turns into Murphy Road). The extent of the new pipe ends in the vicinity of Denney Drive and County Road 21 (Murphy Road) in Baxter, Ontario where it ties into an existing Enbridge pipeline. The pipeline is approximately 10.2 kilometers (km) in length. Appendix A shows the constructed pipeline within a regional context.

### 3.0 Environmental Inspection

In order to ensure that environmental commitments were honoured and that the best industry practices were used, a full time Chief Inspector was onsite. In general, the duties of the Chief Inspector included the following items:

- provide advice to the Project Manager, Construction Inspectors, and all construction personnel regarding compliance with environmental legislation, regulations and industry standards;
- provide advice regarding adherence to environmental specifications and commitments made in the previously mentioned documents and to regulatory agencies, including the Board;
- provide advice on erosion protection measures to be taken in sensitive locations in vicinity of watercourse crossing;
- act as a liaison with environmental regulators, government agencies and interest groups;
- provide immediate advice regarding spill prevention and contingency; and
- ensure appropriate waste disposal of any hazardous construction wastes.

An Enbridge Environment, Health and Safety ("EHS") Specialist also conducted routine inspections of the ongoing construction to identify environmental issues which needed to be addressed and communicated these to the Project Manager. There was also a Project Manager on site full time.

## 4.0 Construction Effects and Mitigation Measures

Construction effects and mitigation measures which were implemented to minimize the potential effects from the construction of the Angus Reinforcement Pipeline Project are summarized in Table 1. 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	Mitigation Measures
Vegetation Cover	Throughout Construction (October 26, 2012 to February 20, 2013)	Permanent removal of vegetation. Aesthetic degradation. Changes in surface drainage patterns affecting amount of water available. Changes to sunlight or wind exposure regimes.	All trees on the road allowance adjacent to roadways were identified prior to construction. Limits of work area marked to minimize encroachment into adjacent agricultural or vegetated areas. Majority of construction completed within existing road allowance.
Topsoil Handling	Throughout Construction	Disruption of surface and subsurface soils. Soil mixing may result in loss of productivity.	Care was taken to minimize mixing of subsoils. Topsoil was replaced on surface during restoration.
			Crossing of the Nottawasaga River, Thornton Creek and four tributaries of Thornton Creek were completed by directional drill. Watercourse crossing permits were obtained from the Nottawasaga Valley Conservation Authority. Sediment fencing was installed to prevent sedimentation and siltation. Geotechnical assessments were completed to assist in development of crossing profile.

Table 1

Construction Effects and Mitigation Measures (Continued)

Activity	Duration	Potential Effect	Mitigation Measures
Watercourse Crossing	Throughout Construction	Disruption of watercourse through siltation and sedimentation. Erosion of channel banks and loss of vegetation cover. Contamination of surface water. Interruption of subsurface drainage along pipeline trench.	Crossing of the Nottawasaga River, Thornton Creek and four tributaries of Thornton Creek were completed by directional drill. Watercourse crossing permits were obtained from the Nottawasaga Valley Conservation Authority. Sediment fencing was installed to prevent sedimentation and siltation. Geotechnical assessments were completed to assist in development of crossing profile.
Traffic Control	Throughout Construction	Exposure of construction crews to vehicular traffic.	Contractor ensured MTO Book 7 traffic control plan has been completed and has been set up in accordance with the prescribed Traffic Layout.
Road Crossings	Throughout Construction	Restricted access to businesses and residences.	Several road crossings, including Innisfil Beach Road, County Road 27 (Barrie Street), 11th Line, 10th Line, 9th Line, 8th Line and Simcoe County Road 56 were completed by directional drill. Warning signs and barricades set up to increase visibility and prevent public access.
Noise	Throughout Construction	Disturbances to sensitive receptors (i.e. residents, seniors' homes, schools).	Construction equipment conformed to guidelines for sound and emission levels.
Archaeological Monitoring	Throughout Construction	Disturbance and potential destruction of archaeological artifacts.	D.R. Poulton & Associates Limited conducted Stage 1 and 2 Archaeological Assessments prior to construction to identify areas of high potential for artifacts. Construction within limits of ROW will minimize potential for encountering archaeological artifacts. No artifacts were encountered.

Table 1

Construction Effects and Mitigation Measures (Continued)

Activity	Duration	Potential Effect	Mitigation Measures
Trenching and Excavation	Throughout Construction	Open trenches present a hazard to vehicular and pedestrian traffic. Restricts access. Sedimentation into roadside ditches.	Protective barricades (i.e. snow fence, sediment fence, jersey barriers, and straw bales) were erected around trenches and excavations during construction activities.
Utility Crossings	Throughout Construction	Minimum distance separation from buried or above-ground services may not provide sufficient room within a road right-of-way (R.O.W.) for the installation of a gas pipeline; damage to utilities may inconvenience landowners.	In accordance with Enbridge Policies and Procedures, locates were obtained prior to any excavation work. Warning signs posted in vicinity of overhead power lines.
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. There was one reportable spill during construction which was a spill of 100 L of bentonite (directional drilling fluid).  Sediment fencing and straw bales were used to contain bentonite.  Vacuum truck cleaned up bentonite. Bentonite did not affect any watercourses or storm sewers.
Hydrostatic Testing	February 1, 2013 February 8, 2013	Disruption of water supply to landowners or emergency services. Uncontrolled discharge of water could cause erosion, sedimentation and contamination of surface water supplies.	A contractor was obtained to bring water to site using water trucks; water was discharged over land using filter bags and Simcoe County was notified. No significant adverse environmental effects resulted from the hydrostatic testing.
Pipe Energizing	February 20, 2013	Inconvenience and/or negative health effects to nearby landowners and the public.	Energizing was completed in accordance with Enbridge Policies and Procedures.
Clean-Up	Throughout Construction	Restores the pipeline easement to pre-construction conditions.	Clean-up activities were conducted in accordance with the Enbridge Construction and Maintenance Manual.  Restoration of the road allowance along the route was completed by Enbridge. Results of the clean-up program were examined in the spring of 2014.

#### 5.0 Residual Issues

Overall, construction activities were carried out with a high level of respect for the environment. Since portions of the pipeline Right-Of-Way "(R.O.W") are located within the road allowance, there may, in the future, be some degradation caused by vehicular traffic and littering that is not a result of construction. This R.O.W. also had erosion and sedimentation issues before construction of the Angus Reinforcement Pipeline Project.

The Interim Monitoring Report filed with the Board in August 2012 identified two outstanding issues related to restoration and vegetation and soil settlement and erosion. One additional issue was identified during the May 8, 2014 site visit in relation to erosion control devices and is discussed below. Restoration efforts completed in the spring of 2013 were not successful due to inclement weather conditions encountered in 2013. Additional restoration efforts will be completed by the end of September, 2014.

As listed in the interim report, the following sections of road allowance required additional restoration and revegetation (all on the north side of County Road 21):

- 4905 County Road 21
- 5977 County Road 21
- 5057 County Road 21
- 5162 County Road 21
- 5628 County Road 21
- 6070 County Road 21

A few additional areas of concern were identified during the May 8, 2014 site visit and are noted below:

- South side of Innisfil Beach Road in vicinity of 4118 Innisfil Beach Road
- Approx. 20 meters west of 4940 County Road 21
- Approx. 100 meters west of 4992 County Road 21
- North side of County Road 21 in vicinity of 5327 County Road 21

Vegetation has reestablished along the road allowances in some of the areas mentioned above where it was disturbed due to construction but most areas require additional attention and restoration efforts, which will be completed by the end of September, 2014.

Erosion, evidenced by rills and gullies in the bank and ditch of the road allowance occurred along several sections of the north side of County Road 21 (refer to locations above). This was addressed by regrading the areas, covering the areas with topsoil followed by the appropriate seed mix and covered with coir erosion control matting but most of the above areas require additional attention and restoration, which will be completed by the end of September, 2014.

Erosion control devices such as silt fences and straw bales were installed where required to control any erosion and sedimentation concerns identified. The straw bales at the following location will be removed:

Approx. 20 meters west of 4992 County Road 21

## 6.0 Summary

This Final Post-Construction Environmental Monitoring Report has been prepared in accordance with the Board Decision docket number EB-2012-0013. It documents construction and clean-up activities conducted in the fall of 2012 and spring of 2013. Most areas require additional attention and restoration efforts, which will occur by the end of September, 2014. An addendum report will be submitted in the fall of 2014 to document the restoration efforts that will be completed in the spring/summer of 2014.

# APPENDIX A PIPELINE ROUTE MAP



**Figure 1: Angus Reinforcement Pipeline Project** 

**APPENDIX B** 

PHOTO LOG (May 8, 2014)



Photo 1: Looking west of 4940 County Road 21



Photo 2: Looking east towards 4992 County Road 21



Photo 3: Looking west of 4992 County Road 21



Photo 4: Looking west on north side of County Road 21 in vicinity of 5057 County Road 21



Photo 5: Looking west on north side of County Road 21 in vicinity of 5057 County Road 21



Photo 6: Looking west towards 5162 County Road 21



Photo 7: Looking west towards 5162 County Road 21



Photo 8: Looking west on north side of County Road 21 in vicinity of 5327 County Road 21



Photo 9: Looking east on north side of County Road 21 in vicinity of 5327 County Road 21



Photo 10: Looking west on south side of Innisfil Beach Road in vicinity of 4118 Innisfil Beach Road