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January 24, 2019

BY RESS & Courier

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

Dear Ms. Walli:

**Enbridge Gas Inc. operating as Union Gas
2018 Sudbury Replacement Project
Board File # EB-2017-0180**

Pursuant to Condition 6 (a) i – v. of the Board's Conditions of Approval for the above-noted project, enclosed please find the Post Construction Report.

Sincerely,

[original signed by]

Shelley Bechard
Administrative Analyst, Regulatory Projects

cc: Z. Crnojacki
N. Marconi
Regulatory Library

**2018 SUDBURY REPLACEMENT
PROJECT**

POST CONSTRUCTION REPORT

**Prepared By: Union Gas Limited
Environmental Planning
January 2019**

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1.0 INTRODUCTION

This Post Construction Report is provided in compliance with the Ontario Energy Board (“OEB”) Decision and Order EB-2017-0180 granting Union Gas Limited (“Union”) leave to construct approximately 20 kilometres of NPS (Nominal Pipe Size) 12 natural gas pipeline in the City of Greater Sudbury. The new pipeline replaces two sections (section 2 and section 3) of NPS 10 natural gas pipeline in the City which was predominately constructed in 1958.

Section 2 is approximately 12 kilometres in length and is located between Union’s Coniston Station on Garson Coniston Road and the Frood Road Station on Frood Road (near Lasalle Boulevard). Section 3 is approximately 8 kilometres in length and is located between Union’s Azilda Station on Clarabelle Road and the Walden Station near Noront Road and Highway 55. A map of the facilities is provided in Appendix A.

Union used existing easements, new easements, and temporary easements during pipeline construction. Union also used road allowances as per the terms and conditions established in Union’s franchise agreement with the City of Greater Sudbury.

The requirements for and details of this report are outlined in the specific conditions issued by the OEB in its Decision and Order dated September 28, 2017, and as listed below. The complete Conditions of Approval can be found in Appendix B. The Conditions of Approval addressed in this report are as follows:

Condition 1

Union Gas Limited (Union Gas) shall construct the facilities and restore the land in accordance with the OEB’s Decision and Order in EB-2017-0180 and these Conditions of Approval.

Condition 3

Union Gas shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.

Condition 4

Union Gas shall advise the OEB of any proposed change to OEB-approved construction or restoration procedures. Except in an emergency, Union Gas shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.

Condition 6

Both during and after construction, Union Gas 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 Union Gas' 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 Union Gas, 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, licenses, and certificates required to construct, operate and maintain the proposed project.
- b) a final monitoring report, 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, which shall:
 - i. provide a certification, by a senior executive of the company, of Union Gas' adherence to Condition 3;
 - 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 Union Gas, including the date/time the complaint was received; a description of the complaint; any actions taken to address the complaint; and the rationale for taking such actions.

2.0 BACKGROUND

Through Union's Integrity Management Program, which involved inspections of the existing NPS 10 pipeline in 2002, 2006/2007, and 2014/2015, Union determined that the pipeline was deteriorating due to corrosion and denting. It was decided that a replacement of the pipeline, rather than continuing with ongoing repairs, was a more efficient way to resolve the corrosion and denting concerns. On May 5, 2017, Union applied to the OEB under section 90(1) of the Ontario Energy Board Act, 1998 for an approval of its proposal to build 20 km of NPS 12 pipeline that would replace two sections of the NPS 10 pipeline in the City of Greater Sudbury. Union also stated in its application to the OEB that the proposed pipeline was the continuation of three previous OEB – approved pipeline replacement projects in the Sudbury Area and increasing the pipeline size to NPS 12 would provide capacity for future growth on the Sudbury system. The OEB granted Union leave to construct the NPS 12 pipeline on September 28, 2017.

Construction was initiated on April 4, 2018 and was placed into service on October 25, 2018. Construction was completed with separate crews working on section 2 and section 3 and generally progressed with following order of operations: flagging/staking, right-of-way preparation/grading (including installations of temporary accesses across watercourses for travel along the right-of-way), excavation and removal of old pipeline, trenching, stringing of new pipeline, welding, joint coating, lowering-in, tie-ins, backfilling, and cleanup. Drilling and blasting of bedrock was also performed to build a trench to install the pipeline in rock, as required. Clean-up and land restoration is ongoing and was completed for the year on November 23, 2018.

On August 1, 2018, while constructing a section of the Sudbury pipeline across watercourse SC 27 (Tributary of Garson – Coniston Creek), Union's Contractor inadvertently left submersible

pumps running for an extended period of time which unfortunately dried up portions of the watercourse leading to a number of fish being killed. As required, the incident and resulting fish kill was reported to the federal Department of Fisheries and Oceans Canada (DFO). The local Ministry of Natural Resources and Forestry and Conservation Sudbury were also notified. Subsequent to the DFO review of the incident, the DFO issued a letter (dated October 15, 2018) to Union and its Contractor stating that they believe that the incident was a violation of the federal Fisheries Act. The DFO noted that the letter was issued as an “official warning” and will form part of the Company’s compliance history for future reference. No charges or fines were issued to Union or its Contractor.

Union, in conjunction with its Contractor, subsequently reviewed their practices and procedures concerning the pumping of water at watercourses to avoid similar incidents from occurring in the future. No other water pumping related incidents occurred during construction.

Union will return to the right-of-way in spring 2019 to complete the remaining cleanup and will also perform a general overview to ensure the 2018 clean-up and restoration measures were successful and all watercourse crossings are stable and re-vegetated. Any areas that require additional restoration measures will be addressed as required.

3.0 POTENTIAL IMPACTS AND MITIGATION

3.1 Condition 1

Union Gas Limited (Union Gas) shall construct the facilities and restore the land in accordance with the OEB’s Decision and Order in EB-2017-0180 and these Conditions of Approval.

Union constructed the facilities and restored the land in accordance with the OEB’s Decision and Order in EB-2017-0180 and the Conditions of Approval, including the conditions from the change request approvals as discussed in section 3.3.

3.2 Condition 3

Union Gas shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.

Union implemented all the recommendations of the Environmental Report filed in the proceeding and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.

3.3 Condition 4

Union Gas shall advise the OEB of any proposed change to OEB-approved construction or restoration procedures. Except in an emergency, Union Gas shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.

Union advised the Board of two (2) changes to OEB-approved construction or restoration procedures on February 20, 2018 (revised February 22, 2018) and April 12, 2018. Union received Board approval for the change requests on March 5, 2018 and April 24, 2018, respectively. Union's change requests and Board approvals are presented in Appendix C.

3.4 Condition 6

Both during and after construction, Union Gas 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 Union Gas' adherence to Condition 1;**

One paper copy and one electronic (searchable PDF) version of this Post Construction Report are provided to the Board. This report is certified by Mike Shannon, P. Eng., Vice President, Storage, Transmission & IMO, that Union has constructed the facilities and restored the land in accordance with

the OEB's Decision and Order in EB-2017-0180 and these conditions of Approval and is confirmed by the signed letter of approval found in Appendix D.

- ii. *describe any impacts and outstanding concerns identified during construction;*

In addition to the incident described in section 2.0, Table 1 summarizes the general 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;*

In addition to the actions taken to address the incident described in section 2.0, Table 1 summarizes 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 Union Gas, 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*

Union's Complaint Tracking System (Table 2), which identifies the current status of complaints received as a result of pipeline construction, was in effect. A complaint is identified as a concern by a landowner that has not been resolved to their satisfaction within three (3) working days. Complaints that remain open will continue to be addressed by Union and a status update will be provided in the Final Monitoring Report.

During construction, a number of concerns other than those listed in Table 2 were raised to Union and their Contractor. These issues were minor in nature and were dealt with by Union and the Contractor in an expeditious manner.

Union will continue to monitor the state of the land and will address any landowner or public concerns should they arise.

- v. *provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.*

Mike Shannon, P. Eng., Vice President, Storage, Transmission & IMO, has certified that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the project and is confirmed by the signed letter of approval in Appendix D.

Union obtained the following environmental permits for construction:

Conservation Sudbury

- Watercourse Crossings – Development, Interference with Wetlands and Alterations to Shorelines and Watercourses – Permit # 2017-58

Permit No.	Watercourse ID/Name	Location	Crossing Method
2017-58	SC 1 – Tributary of Junction Creek	Lot 1, Concession 1, Snider Township	Dam & Pump or Dry Flume
2017-58	SC 2 – Tributary of Junction Creek	Lot 1, Concession 2, Snider Township	Dam & Pump or Dry Flume
2017-58	SC 3 – Tributary of Junction Creek	Lot 1, Concession 2, Snider Township	Dam & Pump or Dry Flume
2017-58	SC 4 – Tributary of Junction Creek	Lot 1, Concession 2, Snider Township	Dam & Pump or Dry Flume
2017-58	SC 5 – Tributary of Junction Creek	Lot 1, Concession 3, Snider Township	Dam & Pump or Dry Flume
2017-58	SC 6 – Tributary of Junction Creek	Lot 1, Concession 3, Snider Township	Dam & Pump or Dry Flume
2017-58	SC 6A – Tributary of Junction Creek	Lot 12, Concession 3, McKim Township	Dam & Pump or Dry Flume
2017-58	SC 7 – Tributary of Junction Creek	Lot 12, Concession 3, McKim Township	Dam & Pump or Dry Flume
2017-58	SC 7A – Unnamed	Lot 12, Concession 3, McKim Township	Dam & Pump or Dry Flume

2017-58	SC 8 – Tributary of Junction Creek	Lot 12, Concession 3, McKim Township	Dam & Pump or Dry Flume
2017-58	SC 8A – Tributary of Junction Creek	Lot 12, Concession 3, McKim Township	Dam & Pump or Dry Flume
2017-58	SC 9 – Unnamed, wastewater collection area	Lot 11, Concession 4, McKim Township	Dam & Pump or Dry Flume
2017-58	SC 10 – Junction Creek (Frood Branch)	Lot 6, Concession 5, McKim Township	Dam & Pump
2017-58	SC 10A – Tributary of Junction Creek (Frood Branch)	Lot 6, Concession 5, McKim Township	Dam & Pump
2017-58	SC 10B – Tributary of Junction Creek (Frood Branch)	Lot 4, Concession 6, McKim Township	Not a watercourse
2017-58	SC 10C – Tributary of Junction Creek (Frood Branch)	Lot 4, Concession 6, McKim Township	Dam & Pump
2017-58	SC 11A – Tributary of Junction Creek	Lot 4, Concession 6, McKim Township	Dam & Pump
2017-58	SC 11B – Tributary of Junction Creek	Lot 3, Concession 6, McKim Township	Dam & Pump
2017-58	SC 12 – Tributary of Junction Creek	Lot 3, Concession 6, McKim Township	Dam & Pump
2017-58	SC 13 – Unnamed	Lot 3, Concession 6, McKim Township	Dry Flume
2017-58	SC 14 – Unnamed	Lot 3, Concession 6, McKim Township	Dry Flume
2017-58	SC 15 – Unnamed	Lot 2, Concession 6, McKim Township	Dry Flume
2017-58	SC 16 – Unnamed	Lot 2, Concession 6, McKim Township	Dry Flume
2017-58	SC 17 – Unnamed	Lot 2, Concession 6, McKim Township	Dry Flume
2017-58	SC 18 – Unnamed	Lot 2, Concession 6, McKim Township	Dam & Pump
2017-58	SC 20 – Unnamed	Lot 1, Concession 6, McKim Township	Dam & Pump
2017-58	SC 21 – Tributary of Junction Creek	Lot 11, Concession 6, Neelon Township	Dam & Pump
2017-58	SC 22 – Junction Creek	Lot 11, Concession 6,	Horizontal Directional

		Neelon Township	Drill (HDD)
2017-58	SC 23 – Junction Creek	Lot 11, Concession 6, Neelon Township	HDD
2017-58	SC 24 – Junction Creek	Lot 10, Concession 6, Neelon Township	HDD
2017-58	SC 25 – Tributary/ditch of Garson – Coniston Creek	Lot 9, Concession 6, Neelon Township	HDD
2017-58	SC 26 – Tributary of Garson – Coniston Creek	Lot 9, Concession 6, Neelon Township	Dam & Pump
2017-58	SC 27 – Tributary of Garson – Coniston Creek	Lot 9, Concession 6, Neelon Township	Dam & Pump
2017-58	SC 28 – Tributary of Garson – Coniston Creek	Lot 7, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 29 – Garson Coniston Creek – west branch	Lot 5, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 30 – Garson Coniston Creek – west branch	Lot 4, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 31 – Garson Coniston Creek – west branch	Lot 4, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 32 – Garson Coniston Creek – west branch	Lot 3, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 33 – Garson Coniston Creek – west branch	Lot 3, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 34 – Garson Coniston Creek	Lot 2, Concession 5, Neelon Township	Dam & Pump
2017-58	SC 35 – Tributary of Garson Coniston Creek – west branch	Lot 4, Concession 5, Neelon Township	Temporary bridge crossing only
2017-58	SC 36 – Tributary of Garson Coniston Creek – west branch	Lot 3, Concession 5, Neelon Township	Temporary bridge crossing only

Ministry of Tourism, Culture and Sport

- Archaeology clearances under the MTCS File Number 0005683

Project Information Form Number	Stage	Location
P131-0010-2016	1	Pipeline route (permanent and

		temporary easements)
P438-0115-2017	2	Pipeline route (permanent and temporary easements) and temporary laydown yards and workspace
P438-0139-2017	2	Additional temporary workspace
P438-0128-2017	1-2	2B Receiver Site
P438-0119-2017	2	Infrastructure Ontario lands

Ministry of the Environment and Climate Change

- Permit to Take Water, Surface and Ground Water, Number 7185-AWZHG8

Fisheries and Oceans Canada

- Letter of Advice, File Number 17-HCAA-01762

Ministry of Natural Resources and Forestry

- Registration with the Ontario Regulation Reg. 242/08 of the *Endangered Species Act, 2007*, M-102-5203957469
- Health and Safety (A) Permit, SU-A-003-17, issued under clause 17(2)(a) of the *Endangered Species Act, 2007*
- Work Permit for Crown Lands, No. SU-049-17, issued under Section 2(1), Regulation 975, as amended, *Public Lands Act, 1990*
- Work Permit for Dredging and Filling Garson Coniston Creek, No. SU2018-0104, issued under Section 2(1), Regulation 975, as amended, *Public Lands Act, 1990*
- Letter of Authority to Conduct Work within Navigable Watercourse Crossing Locations, issued under the authority of Section 27(1) of the *Public Lands Act, 1990*.

- b) a final monitoring report, no later than 15 months after the in-service 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 Union Gas' adherence to Condition 3;*
 - 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 Union Gas, 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.*

One paper copy and one electronic (searchable PDF) version of the final monitoring report will be filed with the Board no later than fifteen months

4.0 SUMMARY

This Post Construction Report has been prepared as per conditions in the Board Order EB-2017-0180. The report provides confirmation that Union has complied with the Conditions of Approval, and provides a description of the identified impacts of construction and the actions taken to mitigate such impacts. It is anticipated that these actions will effectively eliminate any long-term impacts to the environment.

Clean-up and land restoration of the pipeline route will continue in spring 2019.

A Final Monitoring Report will be prepared to evaluate the success of the restoration measures and identify any areas that require additional restoration, if necessary.

Table 1

Potential Impacts and Mitigation Measures

Activity/Component	Potential Impacts/Concerns	Mitigation Measures
a) Pre-pipeline Construction	<ul style="list-style-type: none"> Pipeline construction may be disruptive to landowners. 	<ul style="list-style-type: none"> Prior to pipeline construction, the Lands Relations Agent and Construction Superintendent met with all directly affected landowners to discuss construction and identify any concerns that may need to be addressed.
b) Surveying	<ul style="list-style-type: none"> Surveying may be disruptive to the landowners. Woodlot damage. 	<ul style="list-style-type: none"> Landowners and tenants were notified of intent to enter their property. All woodlot damages were settled with landowners or tenants as required.
c) Access Roads	<ul style="list-style-type: none"> Crossing of watercourses. Vehicular traffic may cause soil rutting, compaction or mixing. 	<ul style="list-style-type: none"> Permits from Conservation Sudbury were obtained and the conditions were followed prior to construction of access roads across watercourses. Culverts and clear span bridges were utilized in the construction of access roads to ensure existing drainage patterns were maintained. Sediment fencing, erosion control matting, and vegetative covers (i.e. grasses) were used alongside watercourses to minimize run-off and erosion. Geotextile fabric was used for new temporary access roads to provide additional stability, minimize compaction, and minimize topsoil mixing with granular material.
d) Clearing	<ul style="list-style-type: none"> The removal of trees and vegetation. 	<ul style="list-style-type: none"> Landowners were eligible for the Union Gas Tree Replacement Program. Tree cut from woodlots will be replaced at a 2:1 per area basis. The harvesting of trees was minimized as much as practical.

Activity/Component	Potential Impacts/Concerns	Mitigation Measures
		<ul style="list-style-type: none"> • All tree clearing was done outside the migratory bird nesting season (April 1 – August 31). • Specification CSPL-03 was followed.
e) Grading	<ul style="list-style-type: none"> • Grading may be necessary for the construction of access roads or work areas. On agricultural lands, grading has the potential to impact soil productivity by disrupting tile drains and causing soil mixing, rutting and compaction, particularly during wet soil conditions. 	<ul style="list-style-type: none"> • Grading was not conducted on wet soils. • Topsoil was stripped and stockpiled on the edge of the easement. • Topsoil stripping was monitored to ensure there was adequate separation of topsoil and subsoil. • No agricultural lands were impacted along the pipeline route. • Specification CSPL-05 was followed.
f) Stringing	<ul style="list-style-type: none"> • Stringing trucks may impact soil productivity due to soil compaction, rutting, and mixing. 	<ul style="list-style-type: none"> • Specification CSPL-11 was followed.
g) Trenching	<ul style="list-style-type: none"> • Trenching may cause soil mixing (topsoil and subsoil mixing), which may impact soil productivity. 	<ul style="list-style-type: none"> • Trenching followed Specification CSPL-06 and CSPL-07. • Prior to trenching, topsoil was separated from subsoil as per Specifications CSPL-04 and CSPL-05.
h) Backfilling	<ul style="list-style-type: none"> • Improper backfilling may cause topsoil/subsoil mixing. 	<ul style="list-style-type: none"> • Specification CSPL-17 was followed.
i) Hydrostatic Testing	<ul style="list-style-type: none"> • Discharge of hydrostatic test water may cause erosion at the point of discharge. 	<ul style="list-style-type: none"> • Measures were used to prevent erosion at the point of discharge. • A permit was secured from the Ministry of the Environment, Conservation and Parks for hydrostatic testing and conditions were followed. • A monitoring program was

Activity/Component	Potential Impacts/Concerns	Mitigation Measures
		undertaken to ensure that water quality had remained within acceptable parameters during testing.
j) Site Restoration	<ul style="list-style-type: none"> Improper site restoration may affect soil productivity. 	<ul style="list-style-type: none"> Restoration followed Specification CSPL-19. Disturbed areas were restored back to pre-construction conditions or better through topsoil replacement, re-grading, seeding/sodding, and erosion control where required. The Lands Relations Agent has ensured and will continue to ensure that the landowners are satisfied with the restoration measures completed on their property.
k) Fuel Storage and Handling	<ul style="list-style-type: none"> Improper fuel storage and handling may cause spillage and possible contamination of soil. 	<ul style="list-style-type: none"> Fuel was not stored near watercourses or wetlands (i.e. within 50 m). Fuel was stored within impervious containment. Spill clean-up material (i.e. absorbent pads) was stored on-site and available at all times.
l) Liquid and Solid Waste Handling	<ul style="list-style-type: none"> Liquid waste, solid waste, and lubricants must be properly handled, stored and disposed of to avoid potential contamination of the surrounding area. 	<ul style="list-style-type: none"> Liquid and solid wastes were properly stored, handled, and disposed of at an approved location. The area was cleared of all debris and litter during and after construction.
m) Fence Removal	<ul style="list-style-type: none"> Fences were removed during construction. 	<ul style="list-style-type: none"> Temporary fences were erected per Specification CSPL-01 and fences were repaired to Specification CSPL-19.
n) Archaeology, Cultural Heritage Landscapes, and	<ul style="list-style-type: none"> Disturbance of heritage resources. 	<ul style="list-style-type: none"> Archaeological Assessments were completed prior to construction. Direction was given to stop

Activity/Component	Potential Impacts/Concerns	Mitigation Measures
Built Heritage Resources		<p>construction if an artifact was encountered and to notify the Ministry of Tourism, Culture and Sport.</p> <ul style="list-style-type: none"> • A Cultural Heritage consultant was retained to determine if impacts to cultural heritage landscapes and/or built heritage resources were anticipated and to develop a mitigation plan if required.
o) Species at Risk	<ul style="list-style-type: none"> • Impacts to species and their habitat. 	<ul style="list-style-type: none"> • Union obtained permits from the Ministry of Natural Resources and Forestry and adhered to the conditions of such permits to mitigate impacts to Blanding's Turtles and Eastern Whip-poor-wills.
p) Watercourse Crossings	<ul style="list-style-type: none"> • Impacts to water quality, fish, and bank stabilization. 	<ul style="list-style-type: none"> • Union obtain permits from Conservation Sudbury and received a Letter of Advice from Fisheries and Oceans Canada for watercourse crossings. • Watercourses were crossed following Union's DFO-endorsed sediment control plans for Dam & Pump and HDD. • Watercourses were restored back to pre-construction conditions or better. The banks were seeded and covered with erosion control blankets immediately after backfill to ensure bank stabilization/re-vegetation.
q) Water Wells	<ul style="list-style-type: none"> • Disruption to water supply. 	<ul style="list-style-type: none"> • If water quality/quantity concerns occurred as a result of construction activities, the Company would supply potable water until the situation was corrected. • Union implemented its standard well monitoring program.

Activity/Component	Potential Impacts/Concerns	Mitigation Measures
r) General Construction Work	<ul style="list-style-type: none"> Noise from the pipeline equipment and/or service vehicles may disrupt nearby residents. Dust from pipeline equipment could be a disturbance to landowners and the public. Pipeline equipment could damage underground utilities. 	<ul style="list-style-type: none"> Noise was controlled to the greatest extent possible to minimize the disruption to nearby residents. All equipment was properly muffled. Municipal noise by-laws were adhered to. Dust on the right-of-way was controlled with a water truck as required. Locates were obtained from all utilities. Any damages to utilities were repaired as soon as possible.

Table 2

Complaint Tracking System

2018 Sudbury Replacement Project: Summary of Landowner Complaints

Date	Property ID	Landowner	Complaint	Resolution	Status
1. April 18, 2018 2. November 19, 2018	S062	Cannone, Francesco	1. The landowner took issue with the amount of trees cleared from the temporary land use (TLU)/ agreed-upon workspace areas. 2. Expressed concerns again with the amount of tree clearing that took place on his property.	1. Reviewed the previously executed documents (by the landowner and Union Land Agent on August 14, 2017) which identified within the documents and map the agreed upon TLU/workspace areas. Noted that Union worked around some areas and they were not 100% cleared (some mature trees were spared). Union remains open to discussions of compensation and tree replacement as per Union's tree replacement program. 2. Ongoing (see above).	Unresolved.
1. June 1, 2018 2. November 19, 2018	SO62	Cannone, Francesco	1. Union offered complimentary pre-construction well water monitoring through AECOM Canada Ltd. for residents with water wells in close proximity to Union pipeline construction. The landowner was notified by AECOM that sampling results showed lead (Pb)	1. The landowner performed a retest (collected sample himself and submitted to Testmark Laboratories), results of which showed lead to be within ODWQS guidelines). To confirm, Union recommended that a second retest be performed (Testmark Laboratories to collect sample). Results from Testmark	Unresolved.

2018 Sudbury Replacement Project: Summary of Landowner Complaints

Date	Property ID	Landowner	Complaint	Resolution	Status
			<p>concentration to be in excess of the limits as per Ontario Drinking Water Quality Standards, Objectives and Guidelines (ODWQS). The landowner was concerned with these results and initiated a retest of his water.</p> <p>2. The landowner states that since the tree clearing was completed for the project, his well water has been disrupted (murky and no longer clear). The landowner is getting the water tested by the Sudbury Health Unit.</p>	<p>confirmed the concentration of lead to be within ODWQS guidelines. Union reimbursed the landowner for all water testing expenses incurred.</p> <p>2. Ongoing.</p>	
<p>1. June 21, 2018</p> <p>2. November 19, 2018</p>	S062	Cannone, Francesco	<p>1. Union's Lands Relations Agent received a phone call from a landowner with concerns of dust drifting from the Right-of-Way (ROW) to the north and along his lawn and house.</p> <p>2. The landowner complained that since the work was completed, his home is full of dust and has spread</p>	<p>1. Followed up with the Contractor and a water truck was dispatched immediately.</p> <p>2. Ongoing.</p>	<p>1. Resolved.</p> <p>2. Unresolved</p>

2018 Sudbury Replacement Project: Summary of Landowner Complaints

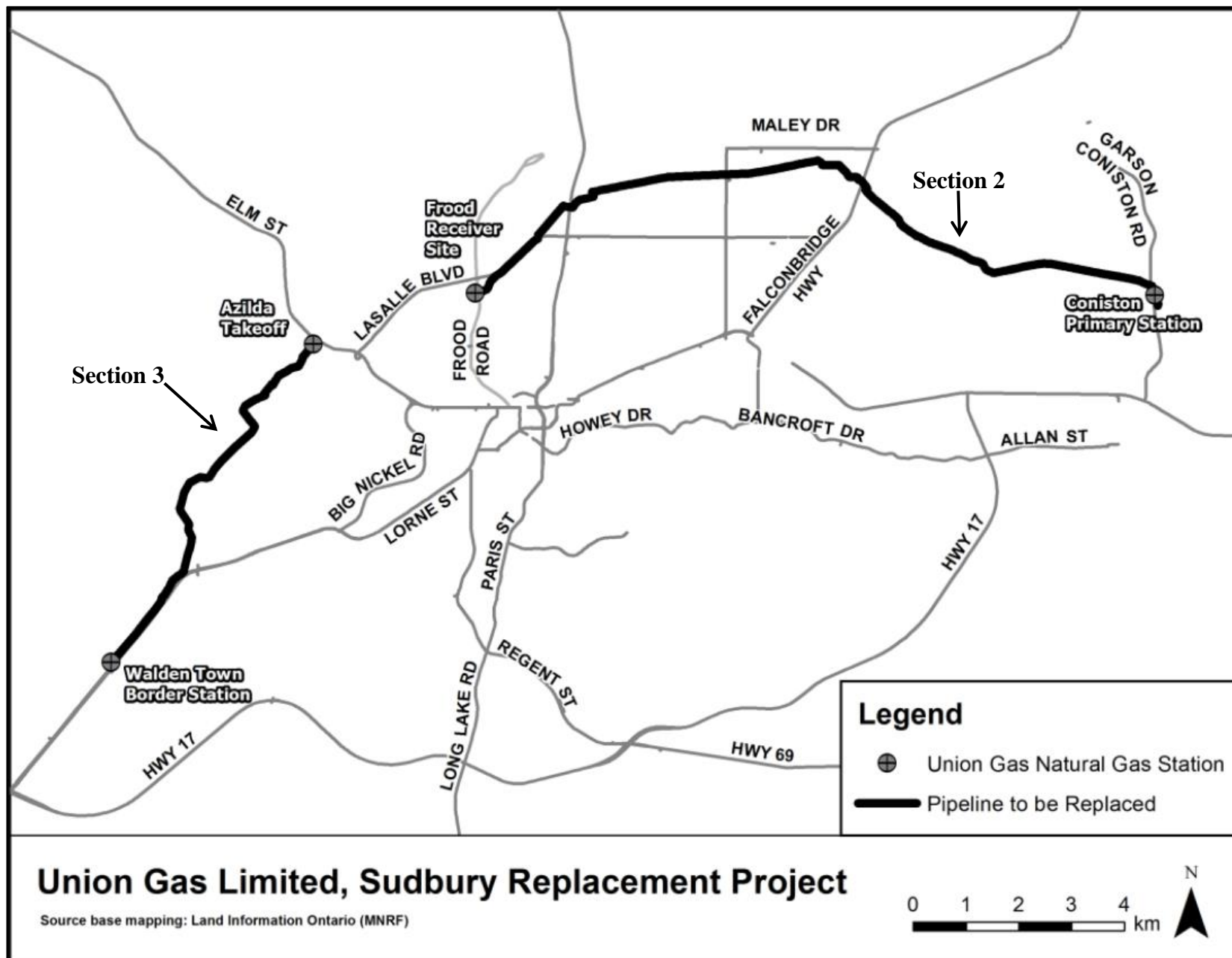
Date	Property ID	Landowner	Complaint	Resolution	Status
			throughout his house. The landowner said he was promised Union would take care of the expense in cleaning it up.		
August 1, 2018	S036	Butera Property Holdings	Requested dust control for the ROW during the dry spell.	Followed up with the Contractor and requested water truck for the next day. The Contractor dispatched water truck, as requested.	Resolved.
August 1, 2018	S043	Maley Developments, Tenant – AFA Forest Products	A tenant requested that no access mats be left on the approved access road at the railway crossing, at the end of the rail line. In the past, a mat had to be moved by the tenant to allow train to proceed through to the off-load area for delivery of lumber.	Followed up with the Contractor and instructed no access mats were to be left on the approved access road at the railway crossing, at any time.	Resolved.
September 10, 2018	S031	Cambrian College	Union's Lands Relations Agent received an email expressing concerns that "a berm of rock" was left behind on the footpath over the ROW and believed this to be a safety concern. It was requested that the "berm" be leveled.	Arranged for a site meeting the same morning with the Complainant, the Union Lands Relations Agent, and a Contractor Representative to identify the area of concern. The "berm" was identified as a raised graveled footpath, which was	Resolved.

2018 Sudbury Replacement Project: Summary of Landowner Complaints

Date	Property ID	Landowner	Complaint	Resolution	Status
				a temporary restoration to provide pedestrian access across the ROW. The Contractor returned that afternoon and resurfaced the footpath with a smaller grade of gravel to the Superintendent's satisfaction.	
September 26, 2018	S036	Butera Property Holdings	The City of Sudbury received a complaint from a local resident regarding the temporary relocation of waste bins from the ROW to an area closer to this resident's property. These bins were contracted directly by the landowner to service tenants of a housing complex.	The Contractor prioritized restoration of bin containment area during the week of October 1, 2018 to expedite the return of bins to original location. The landowner worked with Waste Management to schedule return of bins when bin containment area was restored.	Resolved.
November 19, 2018	S062	Cannone, Francesco	The landowner said that per the contract between Union and himself, he was supposed to receive a monthly stipend from the time his property was disrupted by tree clearing until the status quo on his property was restored, but it was suspended.	Ongoing.	Unresolved.

Appendix A

Project Mapping



Appendix B

Conditions of Approval

Leave to Construct Conditions of Approval

Union Gas Limited

EB-2017-0180

1. Union Gas Limited (Union Gas) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2017-0180 and these Conditions of Approval.
2. (a) Authorization for leave to construct shall terminate 12 months after the decision is issued, unless construction has commenced prior to that date.

(b) Union Gas shall give the OEB notice in writing:
 - i. of the commencement of construction, at least ten days prior to the date construction commences;
 - ii. of the planned in-service date, at least ten days prior to the date the facilities go into service;
 - iii. of the date on which construction was completed, no later than 10 days following the completion of construction; and
 - iv. of the in-service date, no later than 10 days after the facilities go into service.
3. Union Gas shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.
4. Union Gas shall advise the OEB of any proposed change to OEB-approved construction or restoration procedures. Except in an emergency, Union Gas shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.
5. Union Gas shall file, in the proceeding where the actual capital costs of the project are proposed to be included in rate base, a Post Construction Financial Report, which shall indicate the actual capital costs of the project and shall provide an explanation for any significant variances from the cost estimates filed in this proceeding.

6. Both during and after construction, Union Gas 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 Union Gas' 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 Union Gas, 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, licenses, and certificates required to construct, operate and maintain the proposed project.
 - b) A final monitoring report, 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, which shall:
 - i. provide a certification, by a senior executive of the company, of Union Gas' adherence to Condition 3;
 - 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 Union Gas, including the date/time the complaint was received; a description of the complaint; any actions taken to address the complaint; and the rationale for taking such actions.

Appendix C

Change Requests and Approvals



February 20, 2018

RESS and Courier

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Union Gas Limited ("Union")
2018 Sudbury Replacement Project
Board File # EB-2017-0180**

Please find attached Change Request 1, for the above-noted project.

Union believes that this change is not significant and would appreciate your timely review and approval of this request, as construction is in progress.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5457.

Sincerely,

[original signed by]

W. T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects

cc: Nancy Marconi, OEB
Zora Crnojacki, OEB

REQUEST TO VARY

Project Name: 2018 Sudbury Replacement Project

OEB File Number: EB-2017-0180

Change Request: 1

Description and Rationale for Change

Union is proposing changes to the dimensions and locations of permanent easements and temporary land use areas ("Land Rights"), and requests for additional Land Rights, at various locations along the pipeline route to facilitate pipeline construction. Since Union filed its original evidence additional Engineering and Environmental work has been completed for this Project. This additional work has resulted in changes to the land rights required to construct the Proposed Facilities. These changes are generally minor in nature and have been discussed with the directly affected landowners and agencies that have not identified any issues with the proposed changes.

Construction and Restoration Practices

Construction and restoration of the Proposed Facilities will be completed following Union's standard practices.

Environmental

Union will follow its standard environmental mitigation measures.

Consultation

Union has met with the directly affected landowners and agencies and they have not identified issues or concerns.

Lands

Union has discussed the proposed changes with all of the directly affected landowners. No landowners have identified any issues with the proposed changes.

Costs

There will be no increase in project costs as a result of these changes.

For permanent land rights there were both additional lands rights required and some land rights that Union expected to acquire, that during this review it was determined that they were not required. These additions and subtractions resulted in no additional costs for permanent land rights.

For this project Union's temporary land compensation package was based on use of the property not the actual area to be used on the property, therefore there were no additional costs.

Schedule

These changes will not result in any change to the project in-services date.

Attachments

A chart setting out the changes in land rights, which are identified in red is attached at Schedule 1.

Maps showing the location of the permanent easements, which are identified as red cross-hatched areas, and temporary land rights which are identified in solid red, are attached at Schedule 2. The top half of each individual map identifies the land rights previously included in Union's application, as Schedule 9, and the bottom half of each map identifies the additional Land Rights requested.



February 22, 2018

RESS and Courier

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Union Gas Limited ("Union")
2018 Sudbury Replacement Project
Board File # EB-2017-0180**

Please find attached the revised Change Request 1 for the above-noted project. This includes a revised request to vary, unchanged Schedule 1 and a revised Schedule 2.

Union believes that these changes in the land rights required to construct the project are not significant and would appreciate your timely review and approval of this request.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5457.

Sincerely,

[original signed by]

W. T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects

cc: Nancy Marconi, OEB
Zora Cmojacki, OEB

REQUEST TO VARY

Project Name: 2018 Sudbury Replacement Project
OEB File Number: EB-2017-0180
Change Request: 1

Description and Rationale for Change

Union is proposing changes to the dimensions and locations of permanent easements and temporary land use areas ("Land Rights"), and requests for additional Land Rights, at various locations along the pipeline route to facilitate pipeline construction. Since Union filed its original evidence additional Engineering and Environmental work has been completed for this Project. This additional work has resulted in changes to the land rights required to construct the Proposed Facilities. These changes are generally minor in nature and have been discussed with the directly affected landowners and agencies that have not identified any issues with the proposed changes.

Construction and Restoration Practices

Construction and restoration of the Proposed Facilities will be completed following Union's standard practices.

Environmental

Union will follow its standard environmental mitigation measures.

Consultation

Union has met with the directly affected landowners and agencies and they have not identified issues or concerns.

Lands

Union has discussed the proposed changes with all of the directly affected landowners. No landowners have identified any issues with the proposed changes.

Costs

There will be no increase in project costs as a result of these changes.

For permanent land rights there were both additional lands rights required and some land rights that Union expected to acquire, that during this review it was determined that they were not required. These additions and subtractions resulted in no additional costs for permanent land rights.

For this project Union's temporary land compensation package was based on use of the property not the actual area to be used on the property, therefore there were no additional costs.

Schedule

These changes will not result in any change to the project in-services date.

Attachments

A chart setting out the changes in land rights, which are identified in **Red** in the attached Schedule 1.

Maps showing the New Proposed Temporary Land Use locations are identified **Orange** in the attached Schedule 2. These drawings were included in the pre-filed evidence at Schedule 9.

Ontario Energy
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BY E-MAIL

March 5, 2018

Union Gas Limited
Bill Wachsmuth
Senior Administrator, Regulatory Projects
50 Keil Drive North
P.O. Box 2001
Chatham ON N7M 5M1
bwachsmuth@uniongas.com

Dear Mr. Wachsmuth:

**Re: Union Gas Limited
EB-2017-0180 Sudbury Replacement Project
Request to Vary / Change Request No. 1**

The Ontario Energy Board (OEB) is in receipt of your letter dated February 22, 2018, in which Union Gas Limited (Union Gas) requests a variance to the OEB approved Sudbury Replacement Project (Project). In particular, this change request (Change Request 1) pertains to changes in permanent land and temporary land use requirements related to that portion of the project described in the Project application.

Union Gas submits that as a result of additional engineering and environmental work since the Project application was filed, it requires changes to the dimensions and locations of certain permanent and temporary land use areas as described in Change Request 1. Union Gas submits that the proposed changes do not affect any additional landowners beyond those previously identified in its application, that it has consulted the affected landowners and agencies about the proposed changes, and that no issues have been identified. Union Gas submits that this change will not modify the Project's originally proposed construction or restoration practices, environmental mitigation measures, capital costs or project schedule.

As the Manager, Applications Supply and Infrastructure, I have been delegated the authority of the OEB under section 6 of the Ontario Energy Board Act, 1998 to determine whether Union's proposal will result in material changes to the leave to

construct granted by the OEB in the EB-2017-0180 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

Based on my review of the information provided, I find that the described changes do not materially impact the leave granted by the OEB. I hereby approve the proposed change.

Yours truly,

Original signed by

Nancy Marconi
Manager, Applications Supply and Infrastructure



April 12, 2018

RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Union Gas Limited ("Union")
2018 Sudbury Replacement Project
Board File EB-2017-0180**

Please find attached the revised Change Request 2 for the above-noted project.

Union believes that this change in the temporary land rights required to construct the project are not significant and would appreciate your timely review and approval of this request.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5457.

Sincerely,

[original signed by]

W. T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects

cc: Nancy Marconi, OEB
Zora Crnojacki, OEB
Ritchie Murray, OEB

REQUEST TO VARY

Project Name: 2018 Sudbury Replacement Project

OEB File Number: EB-2017-0180

Change Request: 2

Description and Rationale for Change

Union is proposing changes to the dimensions and locations of temporary land use areas adjacent to Hydro One's Martendale Transmission Station. Hydro One requested Union move a temporary land use area west as it is proposing some construction activities within the Martendale Transmission Station. This change is minor in nature and is to accommodate a request from the directly affected landowner Hydro One.

Construction and Restoration Practices

Construction and restoration of the Proposed Facilities will be completed following Union's standard practices.

Environmental

Union will follow its standard environmental mitigation measures.

Consultation

This change only affects Hydro One lands and the change is a result of a request from Hydro One.

Lands

Hydro One has approved the proposed change.

Costs

There will be no increase in project costs as a result of this change.

Schedule

This change will not result in any change to the project in-services date.

Attachments

Schedule 1 shows the original location of the temporary lands adjacent to the Martendale Transmission Station.

Schedule 2 shows the proposed location of the temporary land rights adjacent to the Martendale Transmission Station.

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BY E-MAIL

April 24, 2018

Union Gas Limited
Bill Wachsmuth
Senior Administrator, Regulatory Projects
50 Keil Drive North
P.O. Box 2001
Chatham ON N7M 5M1
bwachsmuth@uniongas.com

Dear Mr. Wachsmuth:

**Re: Union Gas Limited
EB-2017-0180 Sudbury Replacement Project
Request to Vary / Change Request No. 2**

The Ontario Energy Board (OEB) is in receipt of your letter dated April 12, 2018, in which Union Gas Limited (Union Gas) requests a variance to the OEB approved Sudbury Replacement Project (Project). In particular, this change request (Change Request 2) pertains to the dimensions and locations of certain temporary land use areas.

Union Gas submits that Hydro One has requested that Union Gas move a particular existing temporary land use area (Part 3) that is adjacent to Hydro One's Martendale Transmission Station. The reason for the request is that Hydro One is proposing construction activities within the station. In response to the request, Union Gas has proposed to move the particular temporary working area approximately 40 meters west while at the same time slightly modifying the size of two other working areas (Parts 2 and 4). Union Gas submits that the existing and proposed land use areas are on land owned by Hydro One, that Hydro One is the only landowner affected by the proposed change, and that Hydro One has approved Union Gas' proposed change.

Union Gas submits that this change will not modify the Project's originally proposed construction or restoration practices, environmental mitigation measures, capital costs or project schedule.

As the Manager, Applications Supply and Infrastructure, I have been delegated the authority of the OEB under section 6 of the Ontario Energy Board Act, 1998 to determine whether Union's proposal will result in material changes to the leave to construct granted by the OEB in the EB-2017-0180 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

Based on my review of the information provided, I find that the described changes do not materially impact the leave granted by the OEB. I hereby approve the proposed change.

Yours truly,

Original Signed by

Nancy Marconi
Manager, Applications Supply and Infrastructure

Appendix D

Executive Certifications

2018 Sudbury Replacement Project

EB-2017-0180

Decision and Order

September 28, 2017

I hereby certify that Union Gas Limited has constructed the facilities and restored the land in accordance with the OEB's Decision and Order in EB-2017-0180 and the Conditions of Approval, as per Condition 6 (a) (i).



Senior Executive

2019 JAN 23

Date

Condition 6 (a) (i)

6. Both during and after construction, Union Gas shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic copy (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 certification, by a senior executive of the company, of Union Gas' adherence to Condition 1;

Condition 1

Union Gas Limited (Union Gas) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2017-0180 and these Conditions of Approval.



2018 Sudbury Replacement Project

EB-2017-0180

Decision and Order

September 28, 2017

I hereby certify that Union Gas Limited has obtained all other approvals, permits, licenses, and certificates required to construct, operate, and maintain the project as per Condition 6 (a) (v).

Senior Executive

2019 JAN 23

Date

Condition 6 (a) (v)

6. Both during and after construction, Union Gas shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic copy (searchable PDF) version of each of the following reports:
 - a) a post construction report, within three months of the in-service date, which shall:
 - v. provide certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.

Appendix E

Photograph Inventory



1. Topsoil is stripped from the right-of-way and separated from subsoil during pipeline construction to ensure vegetative growth after restoration.



2. Temporary accesses were constructed across watercourses in accordance with permits from the local Conservation Authority.



3. After the topsoil was stripped and the right-of-way was graded, the existing NPS 10 pipeline was excavated and removed.



4. Once the trench for the new NPS 12 was dug, the pipeline was strung out parallel to the trench and welded and coated in preparation to be lowered-in.



5. A number of watercourses were crossed during pipeline construction using Union's Fisheries and Oceans Canada – approved Dam & Pump method. Permits from the local Conservation Authority and Ministry of Natural Resources and Forestry were also obtained and adhered to.



6. When crossing a watercourse, a shorter section of pipe is welded together to be able to complete the crossing as quickly as practical to minimize potential impacts.



7. In areas with rocky soils, the pipe is covered with sand prior to backfilling with native material to prevent damage to the new pipe.



8. Disturbed areas from pipeline construction were returned to pre-construction conditions or better. Sod was installed and watered appropriately where required, as pictured.