

February 7, 2017

By RESS & Courier

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

Dear Ms. Walli:

**Re: Union Gas Limited
Burlington-Oakville Project
Board File # EB-2014-0182**

Pursuant to Condition 6 (a) i. – v. of the Board's Conditions of Approval for the above-noted project, attached please find the post construction report.

Sincerely,

[Original Signed By]

Shelley Bechard
Administrative Analyst, Regulatory Projects

cc: Zora Crnojacki
Nancy Marconi
Regulatory Library

BURLINGTON TO OAKVILLE PIPELINE PROJECT

POST CONSTRUCTION REPORT EB-2014-0182

**Prepared by: Union Gas Limited
Environmental Planning
February 2017**

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1.0 INTRODUCTION

This Post Construction Report is provided in compliance with the Ontario Energy Board (“Board”) Order EB-2014-0182 granting Union Gas Limited (“Union”) “Leave to Construct” approximately 12.2 kilometres of Nominal Pipe Size (NPS) 20 inch diameter steel natural gas pipeline in the Town of Milton and the Town of Oakville in the Region of Halton.

The pipeline commenced at Union’s Parkway West Station and proceeded south under crossing Lower Baseline Road, Highway 407, and 9th Line. The pipeline continued paralleling Highway 403 within the road allowance until under crossing Dundas Street and terminating at Union’s Bronte Gate Station. A map of the pipeline route is included in Appendix A.

The requirements for and details of this report are outlined in the specific conditions issued by the Board in its Order dated December 17, 2015 and as listed below. The complete Conditions of Approval can be found in Appendix B1. The Conditions of Approval addressed in this report are as follows:

Condition 1

Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the Board’s Decision and Order in EB-2014-0182 and these Conditions of Approval.

Condition 3

Union 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 shall advise the Board of any proposed change to Board-approved construction or restoration procedures. Except in an emergency, Union shall not make any such change without

prior notice to and written approval of the Board. In the event of an emergency, the Board shall be informed immediately after the fact.

Condition 6

Both during and after construction, Union shall monitor the impacts of construction and shall file with the Board 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'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 Union, 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.
- 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's 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, 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

2.0 BACKGROUND

Union was granted approval to construct the Burlington to Oakville Pipeline Project on December 17, 2015. Construction was initiated on March 28, 2016 with the pipeline placed into service on November 1, 2016. Cleanup along the pipeline corridor was completed for the year on October 15, 2016, with additional cleanup to occur in spring 2017.

Construction progressed from Union's new Parkway West Valve Nest and Metering/Odorant Station in a southerly direction with the following order of operations: topsoil stripping, grading, stringing, welding, joint coating, directional drilling, trenching, lowering-in, tie-ins, back filling, testing and clean-up.

Union will return to the right-of-way in spring 2017 to complete the following activities: repair any subsidence, ensure there is adequate stability and re-vegetation at all watercourse crossings, perform a general overview and complete any additional clean-up that may be required.

3.0 POTENTIAL IMPACTS AND MITIGATION

3.1 Condition 1

Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the Board's Decision and Order in EB-2014-0182 and these Conditions of Approval.

Union has complied with all conditions imposed by the Board, including those from the change request approvals (Condition 4), during construction of the pipeline and has restored the land according to the evidence in support of its application.

3.2 Condition 3

Union 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 has implemented all the recommendations and mitigation measures outlined in the Environmental Report along with all the recommendations and directives identified by the OPCC.

3.3 Condition 4

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

Union advised the Board of three (3) changes to the Board-approved construction or restoration procedures. The first two (2) changes were requested on May 3, 2016. Union received Board approval for the first two (2) changes on May 4, 2016. The third (3) change was requested on January 23, 2017 and approved by the Board on February 3, 2017.

The first change was a change to the dimensions of the permanent easements and temporary land use areas at various locations. The second change was to update the version of the Canadian Standards Association Code used to determine the design and construction of the pipeline from version Z662-11 to the most recent version Z662-15. Additionally a change to a typographical error was requested noting that Maximum Operating Design Pressure design should be 6170 KPag (not 6160 KPag).

The third change was a notification of a change to the pipeline hydrostatic testing procedure compare to the testing procedure included in Unions pre-filed evidence. The hydrostatic testing procedure used conformed with the CSA code.

The Union change requests and Board approval are presented in Appendix B2

3.4 Condition 6

Both during and after construction, Union shall monitor the impacts of construction and shall file with the Board 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's 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 Paul Rietdyk, Vice President Engineering Construction and STO, that Union has constructed the facilities and restored the land in accordance with the Board's Decision and Order in EB-2014-0182 and the Conditions of Approval and is confirmed by their signed letter of approval found in Appendix B3.

- 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;

Table 1 summarizes the construction impacts and general mitigation measures carried out during construction. All mitigation

techniques used throughout construction will also be implemented during cleanup activities as required.

- iv. include a log of all complaints received by Union, 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 landowner complaints received as a result of pipeline construction, was in effect. A complaint is identified as a concern raised by a landowner that has not been resolved to the landowner's 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 environment and will address any additional landowner concerns if they should arise.

- 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.

Paul Rietdyk, Vice President Engineering Construction and STO, 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 their signed letter of approval found in Appendix B3.

Union obtained the following environmental permits for construction:

Halton Region Conservation Authority

- Watercourse Crossings – Development, Interference With Wetlands and Alterations to Shorelines and Watercourses Permit

Permit No.	Type (AC/SC)	Method of Crossing
5079	SC1	HDD
5080	SC2	Open cut
5081	SC3	HDD
5082	SC4	HDD
5083	SC5 (encroachment)	Open Cut
5084	SC6	Open Cut
5085	SC7	HDD
5086	SC8,9a,9b	HDD
Non-Regulated	SC10	Open Cut
Non-Regulated	SC11	Open Cut
5046	SC12(encroachment)	Open Cut
5141	SC13	Open Cut
5142	SC14	Open Cut
5097	AC1	2x600mm culvert
5098	AC2	2x600mm culvert
5099	AC3	Existing
5100	AC4	750mm culvert

5132	AC5	Not needed for const.
5133	AC6	300mm
5134	AC7	Existing
5135	AC8	600mm culvert

Ministry of Tourism, Culture and Sport

- Archaeology clearance – Stage 2 Archaeological Report reviewed and accepted into the Ontario Public Register of Archaeological Reports

Ministry of the Environment and Climate Change (MOECC)

- Permit to Take Water – Surface and Ground Water, Permit No. 0550-A8WMWT

- 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's 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, 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 a final monitoring report will be filed with the Board no later than fifteen months after the in-service date.

3.4.1 Monitoring Programs

3.4.1.1 Archaeological Assessment

Union Gas Limited retained the services of Stantec Consulting Limited to complete Archaeological Assessments for the project area. Clearance letters were received from the Ministry of Tourism, Culture and Sport for the Stage 1, Stage 2 and the Single Stage 3 site identified within the project area.

3.4.1.2 Watercourse Monitoring

It was necessary to cross fourteen (14) watercourses as part of the Project. Two (2) of the watercourses were non-regulated and the remainder were regulated by Conservation Halton.

Six (6) watercourses were crossed using the horizontal directional drill (HDD) technique and the remaining eight (8) watercourses were crossed using an isolated dry crossing technique (dam & pump) approved by Fisheries and Oceans Canada. All watercourse crossings were performed in accordance to permits obtained from Conservation Halton.

Watercourses were protected prior to, during and following construction with sediment fencing. Immediately following pipeline crossings and

immediately following temporary access removals, disturbed areas adjacent to the watercourses were seeded and protected with erosion control blanket and sediment fencing.

All watercourse crossings were monitored during construction by an Environmental Inspector and all watercourses will be inspected in the spring of 2017 to ensure bank stability and vegetation re-establishment and to implement further mitigation measures as required. All watercourses were also monitored after excessive rainfall events to verify the effectiveness of the sediment fencing.

3.4.1.3 Soil Testing

Prior to construction, Union conducted soil sampling on agricultural lands along the pipeline route. Soil samples were taken and analyzed for Soybean Cyst Nematode (SCN). SCN is a microscopic worm-like organism found in soils and obtain their nutrients by feeding on the root systems of soybeans. Results indicated that SCN was not present on any of the properties tested.

A construction protocol to deal with potential SCN impacted fields was available in the event that results came back positive; however, all soil samples were negative.

3.4.1.4 Water Well Monitoring

Prior to construction, Union retained the services of Stantec Consulting Limited (Stantec) to undertake a water well monitoring program along the entire pipeline route as recommended in the ER and required under the PTTW. The purpose of the program was to establish baseline groundwater

conditions for comparative purposes should groundwater interference complaints arise as a result of the construction or operation of the pipeline. The baseline monitoring program included a door-to-door survey to identify groundwater users within 100 m of general construction activity for the proposed pipeline installation and 200 m of areas with potential bedrock blasting. Well owners were provided a letter detailing the proposed pipeline construction and the proposed monitoring program and had the option of participating in the program. The notification letter included the telephone number of Union's Lands Relations Agent.

Water quality samples were collected by Stantec. In total, five (5) water quality samples were collected from five (5) supply wells. Water levels were manually monitored in three (3) of these wells and continuously monitored in one of these wells.

Water samples were analyzed for general inorganic and bacteriological water quality parameters and the results were compared to the Ontario Drinking Water Quality Standards (ODWS) established by the Ontario Ministry of the Environment and Climate Change (MOECC) per Ontario Regulation 169/03.

Upon receiving the results, Stantec immediately notified any residents whose water exceeded the MOECC ODWS Maximum Acceptable Concentration (MAC) for any tested parameter. Water quality results indicated ODWS MAC exceedances for total coliforms in two (2) samples. Stantec provided the residents with a summary letter of the results and with the contact information for the public health unit within the Region of Halton in case of further questions.

3.4.1.5 Species at Risk (SAR)

Prior to construction, Stantec completed detailed habitat assessments and field surveys to confirm habitat and species occurrences in the Project Area. No confirmed Species at Risk or their habitats were identified within the project area.

3.4.1.6 Tree Removal

Tree removal was initiated on February 27th, 2016 and was completed on March 15th, 2016 thus avoiding avian nesting concerns.

3.4.1.7 Tree Replacement Program

This program is designed as a reforestation initiative to replant twice the area of trees cleared from the woodlots prior to construction. Landowners who have had trees cleared from their property are given the option to have native tree species of their choice planted on their property in the spring of 2017.

4.0 SUMMARY

This Post Construction Report has been prepared as per conditions in the Board Order EB-2014-0182. The report provides an outline of Unions' compliance with the commitments of its witnesses, the measures implemented during construction to minimize disturbance to the environment, and a description of Unions' monitoring programs. It is anticipated that these measures will effectively eliminate any long-term impacts to the environment.

A review of the pipeline route will be undertaken in the spring of 2017 to determine if any additional clean-up will be required. Should additional clean-up be required, it will be completed as soon as conditions allow in spring 2017.

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	Effects	Mitigation Measures
a) Pre-pipeline Construction	<ul style="list-style-type: none"> Pipeline construction may be disruptive to landowners and farming operations 	<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 (i.e. tiles) that may need to be addressed.
b) Surveying	<ul style="list-style-type: none"> Surveying may be disruptive to the landowners Crop and woodlot damage 	<ul style="list-style-type: none"> Landowners and tenants were notified of intent to enter their property All crop and woodlot damages were settled with landowners or tenants as required
c) Access Roads	<ul style="list-style-type: none"> Vehicular traffic may cause soil rutting, compaction or mixing 	<ul style="list-style-type: none"> Permits from the local Conservation Authority were obtained and the conditions were followed prior to construction of access roads across watercourses Culverts 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 	<ul style="list-style-type: none"> Landowners were eligible for the Union Gas Tree Replacement Program Trees cut from woodlots will be replaced at a 2:1 per area basis The harvesting of trees was minimized as much as practical All tree clearing was done outside the migratory bird nesting season (April 1 – August 31)
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"> Broken tiles were repaired as per Specification CS-18-13 and Drawings NO. PL-18-13-01 and PL-18-13-02. Grading was not conducted on wet soils Topsoil was stripped and stockpiled on the edge of the easement on the spoil side of the trench and in some areas on the work side Topsoil stripping was conducted as per Specifications CS-04-13 and CS-05-13 Topsoil stripping was monitored to ensure there was adequate separation of topsoil and subsoil All construction protocols for Soybean Cyst Nematodes were in place and 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 CS-11-13 was followed.

Activity	Effects	Mitigation Measures
g) Trenching	<ul style="list-style-type: none"> Trenching may disrupt tile drains and cause soil mixing (topsoil and subsoil mixing), which may impact soil productivity 	<ul style="list-style-type: none"> Trenching followed Specification CS-06-13 Prior to trenching, topsoil was separated from subsoil as per Specifications CS-04-13 and CS-05-13
h) Backfilling	<ul style="list-style-type: none"> Improper backfilling may cause topsoil/subsoil mixing 	<ul style="list-style-type: none"> Specification CS-17-13 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 (filtration tub) to prevent erosion at the point of discharge A permit was secured from the Ministry of Environment and Climate Change prior to hydrostatic testing and conditions were followed A monitoring program was 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 CS-19-13 Disturbed areas were restored by re-grading, followed by chisel ploughing and/or subsoiling and disking Soil compaction was monitored by the Soils Inspector to determine if these methods were suitable The Lands Relations Agent has reviewed and discussed the site restoration measures with the landowner and tenant to identify any concerns or suggestions with regards to these measures Upon completion, the Lands Relations Agent reviewed the area with the landowner and tenant to ensure restoration was completed to their satisfaction
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 100 m) Fuel storage areas were clearly marked Spill clean-up material (i.e. absorbent pads) were stored on-site and available at all times
l) Liquid and Solid Waste	<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) General	<ul style="list-style-type: none"> i) Fences ii) Mixing, rutting, and compaction 	<ul style="list-style-type: none"> Fences were repaired to Specification CS-01-13 The area was cleared of all debris and litter during and after construction

Table 2

Summary of Landowner Complaints Burlington Oakville Pipeline Project

SUMMARY OF LANDOWNER COMPLAINTS
Burlington Oakville NPS 20

Date	Property Identification Number	Complaint	Resolution	Status
06/10/2016	BOP 11	Sink hole noted by Environmental Inspector Tyler Stewart in October, topsoil added to fill area. Tenant Dave Robinson advised to not farm it, area marked, photos forwarded to tenant of the area in question.	Landowner advised in October, tenant paid for crop loss and inconvenience for 2016/2017 crops. Advised that area will be monitored further in the spring of 2017.	Resolved 07/10/2016, requires further monitoring in 2017.
12/05/2016	BOP 16	Adjacent landowner was affected by erosion from a bell hole dug to facilitate a road crossing.	Union met with adjacent landowner to explain situation and restored the land to its preconstruction condition.	Resolved 17/06/2016 reclaimed

Appendix A

General Location Map

GENERAL LOCATION MAP BURLINGTON TO OAKVILLE PROJECT



Appendix B1

Conditions of Approval

Leave to Construct Conditions of Approval
Application under Sections 90 of the OEB Act
Union Gas Limited
EB-2014-0182

1. Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the Board's Decision and Order in EB-2014-0182 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 shall give the Board 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 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 shall advise the Board of any proposed change to Board-approved construction or restoration procedures. Except in an emergency, Union shall not make any such change without prior notice to and written approval of the Board. In the event of an emergency, the Board shall be informed immediately after the fact.
5. Union 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 shall monitor the impacts of construction, and shall file with the Board 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'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 Union, 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's 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, 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.

Appendix B2

Change Requests and Approvals



May 3, 2016

RESS

Ms. Pascale Duguay
Facilities Applications
Ontario Energy Board
2300 Yonge Street, Suite 2700
Toronto, Ontario
M4P 1E4

Dear Ms. Duguay:

**Re: Union Gas Limited ("Union")
Burlington Oakville Pipeline Project
Board File # EB-2014-0182**

Please find attached two Change Requests for the above-noted project.

Union believes that these changes are not significant and would appreciate your timely review and approval of these requests.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-4601.

Sincerely,

Mark A. Murray, LL.B
Manager Regulatory Projects and Land Acquisition

cc: Zora Cmojacki, OEB Project Advisor

ONTARIO ENERGY BOARD
LEAVE TO CONSTRUCT CHANGE REQUEST

Project Name: Burlington Oakville Pipeline Project

OEB File Number: EB-2014-0182

Change Request: #1

Description and Rationale for Change

Union is proposing changes, to the dimensions of permanent easements and temporary land use areas at various locations along the pipeline route to facilitate requests from the landowners and pipeline construction.

Construction and Restoration Practices

There are no changes proposed for the construction of the proposed facilities.

Environmental

No new environmental mitigation measures will be required.

Consultation

Union has met with the directly affected landowners and no issues have been identified.

Lands

Union has acquired the necessary permanent easements and temporary land rights.

Costs

These changes will not result in any additional costs to the project.

Schedule

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

Maps

A chart setting out the changes in land rights is attached at Schedule 1. Maps showing the location of the permanent easements and temporary land rights are attached at Schedule 2.

ONTARIO ENERGY BOARD
LEAVE TO CONSTRUCT CHANGE REQUEST

Project Name: Burlington Oakville Pipeline Project
OEB File Number: EB-2014-0182
Change Request: #2

Description and Rationale for Change

Union is proposing to change the version of the Canadian Standards Association Code for determination design and construction of the pipeline from version Z662-11 to the most recent version Z662-15. Also to fix a typographical error, the Maximum Operating Pressure design parameter is to be changed from 6160 KPag to 6170 KPag.

Construction and Restoration Practices

This change will not impact any construction procedures.

Environmental

No new environmental mitigation measures will be required.

Consultation

There are no landowners issues associated with this change.

Lands

No additional land rights are required.

Costs

These changes will not result in any additional costs to the project.

Schedule

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

Maps

No attachments are required for this change request.

**Ontario Energy
Board**

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BY E-MAIL

May 4, 2016

Mark A. Murray
Union Gas Limited
Manager, Regulatory Projects and Land Acquisition
P.O. Box 2001
50 Keil Drive North
Chatham ON N7M 5M1

Dear Mr. Murray:

**Re: Union Gas Limited (Union)
Burlington Oakville Pipeline Project
Change Requests
Board File Number: EB-2014-0182**

The Ontario Energy Board (OEB) is in receipt of your letter dated May 3, 2016 in which you informed the OEB of two changes for the Burlington Oakville Pipeline Project.

The first change is to the dimensions of permanent easements and temporary land use areas at various locations along the pipeline route. The second change is to the version of the Canadian Standards Association Code used for determining the design and construction of the pipeline from version Z662-11 to the most recent version (Z662-15). Union is also asking to fix a typographical error noting that the Maximum Operating Pressure design parameter should be 6170 KPag (not 6160 KPag).

As the Manager, Natural Gas Applications, I have been delegated the authority of the OEB under Section 6 of the *Ontario Energy Board Act, 1998* to determine whether Union's proposals will result in material changes to the leave to construct granted by the OEB in the EB-2014-0182 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

You indicated that for the first change there are no proposed changes to the

construction of the facilities, there are no new environmental mitigation measures required, and there will be no additional costs to the project. In addition, all of the necessary permanent easements and temporary land rights were acquired and no issues have been raised by the directly affected landowners. For the second change, there will be no impact on any construction procedures and therefore there will be no impacts on any other aspect of the project.

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

Yours truly,

Original Signed By

Pascale Duguay
Manager, Natural Gas Applications

January 23, 2017

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")
Burlington Oakville Pipeline Project
Board File # EB-2014-0182**

This letter is to inform the Board of a change that happened in the field during hydrostatic testing of the pipeline for the above-noted project. Please find attached Change Request 3.

In making the change which is permitted by the CSA code, it is Union's position that this change is not significant and is allowed for under code. Union 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,

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

cc: Nancy Marconi, OEB
Zora Crnojacki, OEB

REQUEST TO VARY

Project Name: Burlington Oakville Pipeline Project
OEB File Number: EB-2014-0182
Change Request: 3

Description and Rationale for Change

Union, in its pre-filed evidence at Exhibit 8, Tab 10, Page 6 of 9, stated that it would follow the requirements of CSA Z662-15 Oil and Gas Line Pipeline Systems Section 8 in relation to Hydrostatic testing of the pipeline. The code allows for a variety of test durations ranging from one hour to 24 hours depending upon the site specific circumstances (24 hour tests are required when gases are used as the test medium). For this project where, water was used as the test medium, the mainline testing was held for a duration of eight hours as opposed to the 24 hours identified on pages 5 and 9 of the pre-filed evidence. The eight hour test is allowed for in the CSA code and an acceptable method for testing the pipeline.

Construction and Restoration Practices

This change will not impact any construction procedures.

Environmental

No new environmental mitigation measures will be required.

Consultation

There are no landowners issues associated with this change.

Lands

No additional land rights are required.

Costs

These changes will not result in any additional costs to the project.

Schedule

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

Maps

No attachments are required for this change request.

**Ontario Energy
Board**
P.O. Box 2319
27th. Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416-481-1967
Facsimile: 416-440-7656
Toll free: 1-888-632-6273

**Commission de l'énergie
de l'Ontario**
C.P. 2319
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2300, rue Yonge
Toronto ON M4P 1E4
Téléphone: 416-481-1967
Télécopieur: 416-440-7656
Numéro sans frais: 1-888-632-6273



BY E-MAIL

February 3, 2017

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

Dear Mr. Wachsmuth:

**Re: Burlington Oakville Pipeline Project – EB-2014-0182
Request to Vary
Change Request No. 3**

The Ontario Energy Board (OEB) is in receipt of your letter dated January 23, 2017 where Union Gas limited (Union) advised the OEB of a change to the Burlington Oakville Pipeline Project (Change Request No. 3).

The change relates to the duration of Union's hydrostatic testing of the pipeline. Union is required to adhere to all requirements of the CSA Standards Z662 for Oil and Gas Pipelines Systems (CSA Z662). In the pre-filed evidence, Union proposed that the test duration of the pipeline be for 24 hours. Union noted that water was used as the test medium, and the duration of the test was held for eight hours. The CSA Z662 requires that a pipeline in this site specific situation be tested for duration of no less than four hours for a liquid medium.

As the Manager, Applications Policy and Climate Change, I have been delegated the authority of the OEB under section 6 of the *Ontario Energy Board Act, 1998* to determine whether Union's proposals will result in material changes to the leave to construct granted by the OEB in the EB-2014-0182 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

Union stated that this change will not modify the construction methods, or environmental mitigation measures and consultation. Union also noted that no additional lands will be needed, and the total cost to the project and the in-service date will remain as planned.

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

Yours truly,

Original Signed by

Pascale Duguay
Manager, Applications Policy and Climate Change

Appendix B3

Executive Certification



Burlington Oakville Pipeline Project

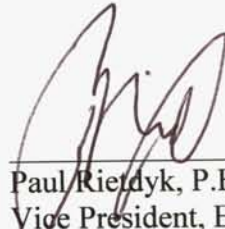
EB-2014-0182

Decision and Order

December 17, 2015

I hereby certify Union Gas Limited has complied with the Decision and Order, Appendix B, EB-2014-0182, Section 6 (a) (v).

Date Jan 27, 2017


Paul Riedyk, P.Eng.
Vice President, Engineering,
Construction, and Storage &
Transmission Operation,
Union Gas Limited

Condition 6 (a) (v).

- a) a post construction report, within three months of the in-service date, which shall:
- 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.



Burlington Oakville Pipeline Project

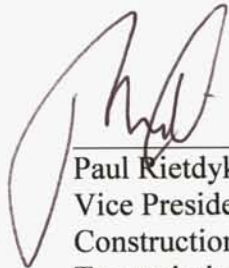
EB-2014-0182

Decision and Order

December 17, 2015

I hereby certify Union Gas Limited has complied with the Decision and Order, Appendix B, EB-2014-0182, Section 6 (a) (i).

Jan 27, 2017
Date


Paul Rietdyk, P.Eng.
Vice President, Engineering,
Construction, and Storage &
Transmission Operation,
Union Gas Limited

Condition 6 a) i.

- 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's adherence to Condition 1;

Condition 1

Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the Board's Decision and Order in EB-2014-0182 and these Conditions of Approval.

Appendix C

Photograph Inventory



Measurements are taken to distinguish between topsoil and subsoil. A dozer is then used to perform the operation of separating the two layers.



Upon completion of the topsoil stripping, the pipe is strung out along the easement to be welded together. Pipe is placed off the ground on cones and wooden skids to protect the coating from damage.



Pipe is then fitted up and welded together by a team of welders using one on each side. Four passes are made to complete the weld and upon completion each weld is given a visual inspection and x-ray by a third party company.



After the pipe is welded together the coating process begins. First step of the coating process is to sand blast the area of the weld down to bare metal so coating can be applied.



After the pipe is blasted down to bare metal two qualified and certified workers mix an epoxy coating “kit” and spread the product evenly over the bare metal using paint brushes and rollers.



Upon the coating curing, QC tests are carried out to verify the thickness and consistency of the paint. Once QC is completed the tool shown above known as a “jeep” checks for any other spots that may have been missed.



After the pipe has been welded and coated excavators are used to dig the ditch or trench where it will be installed. The running line and depth of this trench is laid out using GPS survey equipment to ensure maximum accuracy.



Some areas such as creek crossing and road ways cannot be excavated so a Horizontal Direction Drill (HDD) is used to bore a hole in the ground and pull the pipe through with no surface disturbance.



Once the ditch is completed side booms using cradles pick the pipe up and slowly roll it into the ground. During this process the entire pipe is checked for coating damage one last time with the Jeepster before it is buried.



After the pipe has been laid in the ditch the survey crew walks along and shoots every weld before backfill begins. Backfill starts with “shading” which is the excavator covering the pipe gently with approx. 2ft of material for protection before the full backfill is completed. A spotter is present at all times watching for rocks that could potentially damage the pipe.



Some of our smaller creeks are crossed using an “open cut” method meaning the creek flow (if any) is dammed off before an excavator digs through for the installation of the pipe. SC14 open cut crossing is shown above.



When a crossing is “open cut” it must be restored to original state the day of. The above picture shows SC14 being restored with top soiled and seeded with silt fence back in place to prevent any siltation from entering the channel.



After the topsoil and seed have been replaced an erosion matting is laid down and secured over top to prevent bank/channel erosion and promote seed germination.



When the pipe has been backfilled the R.O.W is the sub graded and top soiled back to its original state. Shown above is a section of farm land completed and ready to be turned back to the land owner.