

By RESS & Courier

May 31, 2016

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

Dear Ms. Walli:

**Re: Union Gas Limited
Bay of Quinte Replacement Project
Board File # EB-2014-0350**

Pursuant to Condition 3.1 and 4.1 of the Board's Conditions of Approval, attached please find Union's Interim Monitoring Report with affidavit for the above-noted project.

Sincerely,

[original signed by]

Shelley Bechard
Administrative Analyst, Regulatory Projects
Encl.

cc: Z. Crnojacki (Chair, OPCC)
Regulatory Library

BAY OF QUINTE REPLACEMENT PIPELINE PROJECT

INTERIM MONITORING REPORT

Prepared by: Union Gas Limited
Environmental Planning
May 2016

TABLE OF CONTENTS

Bay of Quinte Replacement Pipeline Project Interim Monitoring Report

	<u>Page No.</u>
1.0 Introduction	1
2.0 Background	3
3.0 Potential Impacts and Mitigation	4
3.1 Condition 1.1)	4
3.2 Condition 1.3)	4
3.3 Condition 1.4)	5
3.4 Condition 2.4)	5
3.5 Condition 3.1)	5
3.5.1 Report Circulation.....	5
3.5.2 Landowner Concerns.....	6
3.5.3 Well Water Complaint.....	6
3.6 Condition 3.2)	7
3.6.1 Monitoring Programs.....	7
3.6.1.1 Archaeological Assessment	7
3.6.1.2 Water Well Monitoring	7
3.6.1.3 Watercourse Monitoring.....	8
3.6.1.4 Tree Removal.....	9
4.0 Condition 4.1).....	9
5.0 Summary	10

TABLE 1..... Potential Impacts and Mitigation Measures

APPENDIX A..... Location Map

APPENDIX B..... Conditions of Approval

APPENDIX C.....Approval Affidavit

APPENDIX D..... Photograph Inventory

1.0 INTRODUCTION

This Interim Monitoring Report is provided in compliance with the Ontario Energy Board (“Board”) Order EB-2014-0350 granting Union Gas Limited (“Union”) “Leave to Construct” approximately 1.3 kilometres of Nominal Pipe Size (NPS) 8 inch diameter steel natural gas Picton Lateral pipeline in Tyendinaga Township in the County of Hastings and Sophiasburg Township in Prince Edward County.

Previously an existing NPS 6 inch pipeline was attached to the bridge structure, however as a result of scheduled upgrading of the Skyway Bridge which spans the Bay of Quinte and an order from the Ministry of Transportation, the pipeline could no longer be remain on the bridge.

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 March 19, 2015 as listed below. The Conditions of Approval can be found in Appendix B.

Accordingly, the purpose of this Interim Monitoring Report is to fulfill these conditions.

1.0 Condition 1.1

Union Gas Limited (“Union”) shall construct the facilities and restore the land in accordance with its application and evidence filed in EB-2014-0350.

Condition 1.3

Union Gas shall implement all the recommendations contained in the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee (“OPCC”).

Condition 1.4

Union Gas shall advise the OEB's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the OEB or its designated representative. In the event of an emergency, the OEB shall be informed immediately after the fact.

2.0 Condition 2.4

Union Gas shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the OEB's Order.

3.0 Condition 3.1

Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and final monitoring report with the OEB. The interim monitoring report shall be filed within six months of the in-service date and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

Condition 3.2

The interim monitoring report shall confirm Union's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.

4.0 Condition 4.1

Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, and shall provide an affidavit that all such approvals, permits, licences, and certificates have been obtained.

2.0 BACKGROUND

Union was granted approval to construct the Bay of Quinte Replacement Pipeline Project on March 19, 2015. Construction was initiated on August 8, 2015 with the pipeline placed into service on December 4, 2015 and cleanup for the year completed on December 17, 2015. Union replaced the existing NPS 6 inch pipeline which will be removed from the bridge in 2016 and installed an NPS 8 inch pipeline under the Bay of Quinte using the horizontal directional drill method. Construction progressed south of the bay from a tie-in point to Union's Picton Lateral NPS 6 inch pipeline in a northerly direction to a tie-in point to Unions NPS 6 inch pipeline north of the bay, with the following order of operations: tree removal, topsoil removal, stringing, welding, joint coating, trenching, directional drilling, lowering-in, tie-ins, backfilling, testing and clean-up.

On October 8, 2015 an inadvertent fluid release was detected on the north side of the bay on a residential property within the MBQ territory. Drilling was immediately stopped. The fluid was contained and the affected area cleaned. It was determined that the fluid accessed the surface through an unknown water well that had not been properly abandoned. The well was properly abandoned on October 28, 2015.

Union Gas and Stantec, worked with the MBQ, Health Canada and the Ministry of the Environment and Climate Change to rectify the situation. Union Gas provided bottled water to the residents as a precautionary measure and continued until additional testing undertaken by Stantec and Health Canada indicated that there was no effect to the water wells in the area related to the fluid release and MBQ confirmed that the issue was addressed.

To resolve the possibility of a further fluid release when drilling was resumed, Unions drilling contractor Michels Canada employed the use of an additional machine that drilled from the north side of the bay at the original intended exit point. The drill head was equipped with a steering tool to ensure an accurate alignment to the existing hole. Michels felt that drilling from the north would place less fluid pressure in the area of the fluid release. The drill and installation of the pipeline were successful.

Union will return to the right-of-way in spring 2016 to complete the following activities: repair any subsidence on the right-of-way, ensure there is adequate stability and re-vegetation, perform a general overview of the right-of-way and complete any additional clean-up that may be required.

3.0 POTENTIAL IMPACTS AND MITIGATION

3.1 Condition 1.1

Union Gas Limited (“Union”) shall construct the facilities and restore the land in accordance with its application and evidence filed in EB-2014-0350 except as modified by this Order and these Conditions of Approval.

Union has complied with all conditions imposed by the Board during construction of the pipeline and has restored the land according to the evidence in support of its application.

3.2 Condition 1.3

Union Gas shall implement all the recommendations of the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee (“OPCC”) review.

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

3.3 Condition 1.4

Union Gas shall advise the OEB's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the OEB or its designated representative. In the event of an emergency, the OEB shall be informed immediately after the fact.

There were no changes to construction or restoration procedures during this project.

3.4 Condition 2.4

Union Gas shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the OEB's Order

This Interim Monitoring report shall confirm that the work has been performed according to the Board's Order.

3.5 Condition 3.1

Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and final monitoring report with the OEB. The interim monitoring report shall be filed within six months of the in-service date and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

3.5.1 Report Circulation

Four (4) copies of this Interim Monitoring Report are provided to the Board.

3.5.2 Landowner Concerns

Union's complaint tracking system, which identifies the current status of landowner complaints received as a result of pipeline construction, was/is in effect.

A complaint is identified as a concern raised by a landowner, which has not been resolved to the landowner's satisfaction within three (3) working days. There were no complaints entered into the complaint tracking system. During construction, issues that were minor in nature were raised to Union and their contractor. These were dealt with by Union or the Contractor in an expeditious manner.

3.5.3 Water Well Complaint

Prior to the development of the directional drill plan, Union completed geotechnical surveys in October 2014 to investigate terrain and subsurface conditions to aid in the detailed design of the directional drill crossing.

On May 21, 2015, Union received a complaint from a resident of a well interference. Union Gas employed the services Stantec Consulting Ltd. (Stantec) to investigate the complaint. Stantec contacted the resident on May 22, 2015 to discuss the well interference and schedule a site visit for May 29, 2015 at which time water samples were taken.

Stantec concluded that based on the drilling details, the immediate abandonment of the geotechnical borehole with the use of cement/bentonite and the historical water quality within the area, well interference due to Union Gas activity was not interpreted. A letter outlining the investigation process and conclusions was sent to the landowner on July 3, 2015. No additional complaints have been received.

The final monitoring report will address any outstanding issues if they should arise. Union will continue to monitor the state of the land and environment and will address any additional landowner concerns, if they should arise.

3.6 Condition 3.2

The interim monitoring report shall confirm Union's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.

In fulfilment of Condition 3.2, Table 1 summarizes the construction effects and general mitigation measures carried out during construction. All mitigation techniques used throughout construction will also be implemented during cleanup activities as required.

3.6.1 Monitoring Programs

3.6.1.1 Archaeological Assessment

Union Gas retained the services of Stantec Consulting Ltd. to conduct a Stage 1 archaeological background study in August 2014. The study indicated that portions of the study area exhibit moderate to high potential for the identification and recovery of archaeological resources. Therefore a Stage 2 assessment was required. The Stage 2 field assessment was conducted between June 3, 2014 and November 24, 2014 and resulted with no archaeological resources identified.

3.6.1.2 Water Well Monitoring

Union employed the services of Stantec to provide a residential well monitoring program. The program included the sampling of wells within the Mohawk of the Bay of Quinte (MBQ) territory which included pre-construction sampling performed in June 2015 where 19 wells were tested and mid-construction sampling undertaken in October 2015 where 10 wells were tested. All wells within 200 metres of the drill and any

additional wells as requested by the MBQ were tested to document the current ground water conditions as well as water quantity and quality evaluations. A residential sampling program was also initiated on the south side of the bay where 10 wells were sampled within a 200 metres radius of the drill.

A post construction monitoring program will be carried out within the MBQ territory in June 2016 for all 19 well locations included in the pre-construction monitoring program.

3.6.1.3 Watercourse Monitoring

It was necessary to cross two (2) watercourses during construction of the project. The crossing of the Bay of Quinte was performed using the horizontal directional drill (HDD) method following the Union Gas / Department of Fisheries and Oceans endorsed Generic Sediment Control Plan – Horizontal Directional Drill. The bay was monitored during the drilling operation with no inadvertent fluid release detected.

The second crossing was performed under authority of the Mohawks of the Bay of Quinte following the Union Gas / Department of Fisheries and Oceans endorsed Generic Sediment Control Plan – Dam and Pump Crossing.

This watercourse was protected prior to, during and following construction by installing sediment fencing and erosion control matting. Disturbed areas adjacent to the watercourse were seeded immediately following the installation of the pipeline.

The watercourse was susceptible to erosion and was checked after excessive rainfall to verify the effectiveness of the sediment control devices. The watercourse will be reviewed for stability and vegetation re-establishment in the spring of 2016 and any necessary mitigation will be undertaken at this time.

3.6.1.4 Tree Removal

A small area of trees to allow for the drilling operation setup was removed outside of the nesting window prior to construction. The landowner was not interested in tree replacement however Union will supply Quinte Conservation with replacement trees for the 2017 tree planting season.

4.0 Condition 4.1

Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, and shall provide an affidavit that all such approvals, permits, licences, and certificates have been obtained.

Union obtained all approval, permits, licences, and certificates required to construct operate and maintain the Sarnia Expansion Pipeline Project. An affidavit acknowledging the acquisition of the approval, permits, licences, and certificates can be found in Appendix C.

5.0 SUMMARY

This Interim Monitoring Report has been prepared as per conditions in the Board Order EB-2014-0350. 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 activities will be undertaken in the spring of 2016 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.

A Final Monitoring Report will be prepared to evaluate the success of the measures and if necessary outline areas in need of additional restoration.

“Table 1”

Potential Impacts and Mitigation Measures

TABLE 1: MITIGATION SUMMARY

Issue	Potential Impact	Mitigation
a) Archaeology	Disturbance to cultural heritage resources.	<ul style="list-style-type: none"> • Prior to any activities associated with the project, an archaeological survey was completed and concluded that the pipeline corridor was free from archaeological concern. No artifacts were found during construction.
b) Species At Risk (SAR)	Encountering SAR	<ul style="list-style-type: none"> • Followed recommendations outlined by Stantec and Ministry of Natural Resources, Sediment fencing was installed in all areas that had the potential to contain the Butler's Garter Snake. No snakes were encountered during construction.
c) Landowner Concerns	Disruption to landowners and tenants	<ul style="list-style-type: none"> • Union provided the landowners with the telephone numbers of Company personnel. • A Landowner Relations Program was established to track complaints during construction. • To date one water well complaint was entered into the complaint tracking system. The complaint was dealt with immediately.
d) Watercourses	Water quality concerns	<ul style="list-style-type: none"> • Union adhered to Company specifications for watercourse crossings. • Union acquired permission from the Mohawks of the Bay of Quinte to work within a watercourse during construction using the dam and pump method. •
e) Road Side Ditches	Water quality concerns	<ul style="list-style-type: none"> • Ensured ditches were returned to pre-construction condition as quickly as possible.
f) Roadways	Disruption to local traffic, landowners.	<ul style="list-style-type: none"> • All paved roadways and driveways were bored if practical. • Union maintained one lane of traffic open. • Traffic controls were implemented as required.
g) Public Safety	Public safety concerns	<ul style="list-style-type: none"> • Company inspectors ensured public safety on construction site. • Ensured proper signage and flag persons were present
h) Commercial/Retail Businesses	Disruption to businesses	<ul style="list-style-type: none"> • Ensured access at all times. • Restored area as soon as possible after construction. • Scheduled construction with owners or managers.
i) Construction Noise	Disturbance to landowners, public.	<ul style="list-style-type: none"> • Construction was carried out during daylight hours whenever possible. • Ensured equipment was properly muffled. • Sound mitigation walls were installed near residences.

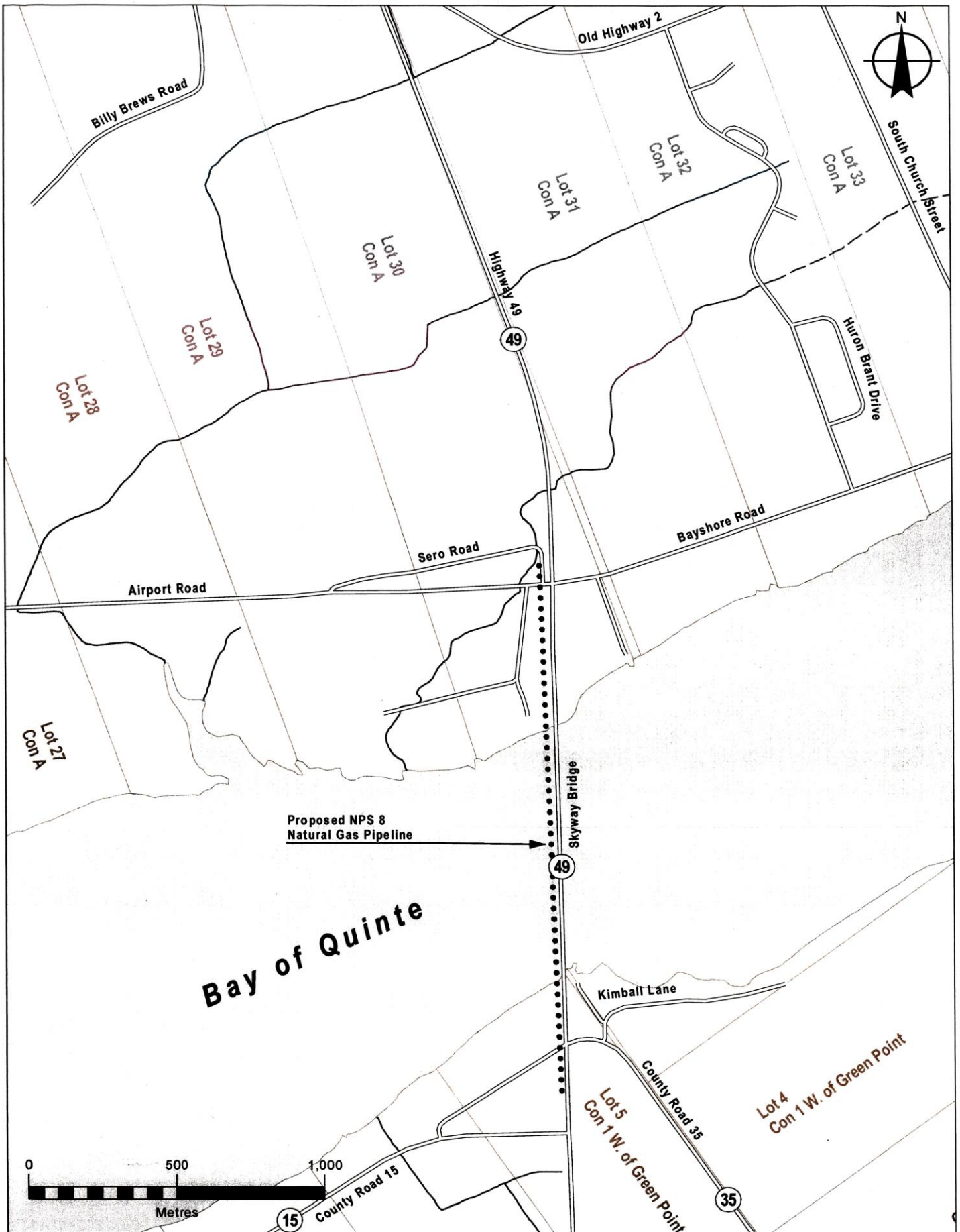
Issue	Potential Impact	Proposed Mitigation
j) Construction Equipment	Disruption to landowners, public.	<ul style="list-style-type: none"> • Equipment was stored well off road shoulders or in a nearby yard when not in use.
k) Traffic	Disruption to local citizens	<ul style="list-style-type: none"> • At least one lane of traffic was maintained at all times. • Flag persons and warning devices were used to notify traffic of the construction zone in accordance with Ministry of Transportation standards.
l) Fuel Storage and Handling	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 (i.e. Within 50 metres) • Spill clean-up materials were stored on site and available in the event of a spill. Spills or leakage were to be reported to the appropriate authority immediately (Ministry of the Environment Spills Action Centre at 1-800-268-6060) • No reportable spills were recorded during construction.

Appendix A

Location Map

GENERAL LOCATION MAP BAY OF QUINTE REPLACEMENT PIPELINE PROJECT





Appendix B

Conditions of Approval

EB-2014-0350

Union Gas Limited Leave to Construct Application

Conditions of Approval

1 General Requirements

- 1.1 Union Gas Limited ("Union") shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2014-0350.
- 1.2 Unless otherwise ordered by the OEB, authorization for Leave to Construct shall terminate December 31, 2015, unless construction has commenced prior to that date.
- 1.3 Union shall implement all the recommendations contained in the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee ("OPCC").
- 1.4 Union shall advise the OEB's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the OEB or its designated representative. In the event of an emergency, the OEB shall be informed immediately after the fact.
- 1.5 Within 15 months of the final in-service date, Union shall file with the Board Secretary a Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and an explanation for any significant variances from the estimates filed in this proceeding.

2 Project and Communications Requirements

- 2.1 The OEB's designated representative for the purpose of these Conditions of Approval shall be the Manager, Natural Gas Applications.

- 2.2 Union shall designate a person as project engineer and shall provide the name of the individual to the OEB's designated representative. The project engineer will be responsible for the fulfillment of the Conditions of Approval on the construction site. Union shall provide a copy of the Order and Conditions of Approval to the project engineer, within seven days of the OEB's Order being issued.
- 2.3 Union shall give the OEB's designated representative and the Chair of the OPCC ten days written notice in advance of the commencement of the construction.
- 2.4 Union shall furnish the OEB's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the OEB's Order.
- 2.5 Union shall file with the OEB's designated representative notice of the date on which the installed pipelines were tested, within one month after the final test date.
- 2.6 Union shall furnish the OEB's designated representative with five copies of written confirmation of the completion of construction. A copy of the confirmation shall be provided to the Chair of the OPCC.

3 Monitoring and Reporting Requirements

- 3.1 Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the OEB. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.
- 3.2 The interim monitoring report shall confirm Union's adherence to Condition 1.1 and shall include a description of the impacts noted during construction

and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.

- 3.3 The final monitoring report shall describe the condition of any rehabilitated land and the effectiveness of any mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

4 Other Approvals

- 4.1 Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, and shall provide an affidavit that all such approvals, permits, licences, and certificates have been obtained.

Appendix C

Approval Affidavit

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.15, Schedule B, and in particular, s.90 thereof;

AND IN THE MATTER OF an Application by Union Gas Limited for an Order granting leave to construct a natural gas pipeline and ancillary facilities in Tyendinaga Township in Hastings County and Sophiasburg Township in Prince Edward County.

:- AFFIDAVIT – CONDITIONS OF APPROVAL :-

I, Tom Grochmal, of the Municipality of Chatham-Kent, in the Province of Ontario, make oath and say as follows:

1. I am the Manager, Engineering Construction, an employee in the Head Office of Union Gas Limited, the Applicant in the matter referred to in the preamble to this my Affidavit and I have personal knowledge of the matters herein deposed to.
2. Pursuant to Condition 4.1 of the Ontario Energy Board's Decision and Order Dated March 19, 2015, EB-2014-0350, I confirm that all approvals, permits, licences and certificates required to construct, operate and maintain the proposed project were obtained.
3. I make this Affidavit in good faith and for no improper purpose.

SWORN BEFORE ME, at the)
Municipality of Chatham-Kent)
in the Province of Ontario,)
this 25th day of May, 2016.)



A Commissioner, etc.

Appendix D

Photograph Inventory



On the north side of the bay, work was undertaken within road allowance. This required the turning lane on Highway 49 to be closed.



To ensure the safety of the workers, cement “Jersey Barriers” were installed to close the turning lane.



The pipe was strung out along the temporary work zone and welded together.



To avoid blocking access to businesses along the west side of Highway 49, the pipe was not welded into a contiguous line. Each pipeline section was pulled into place and another section welded on before continuing the pull.



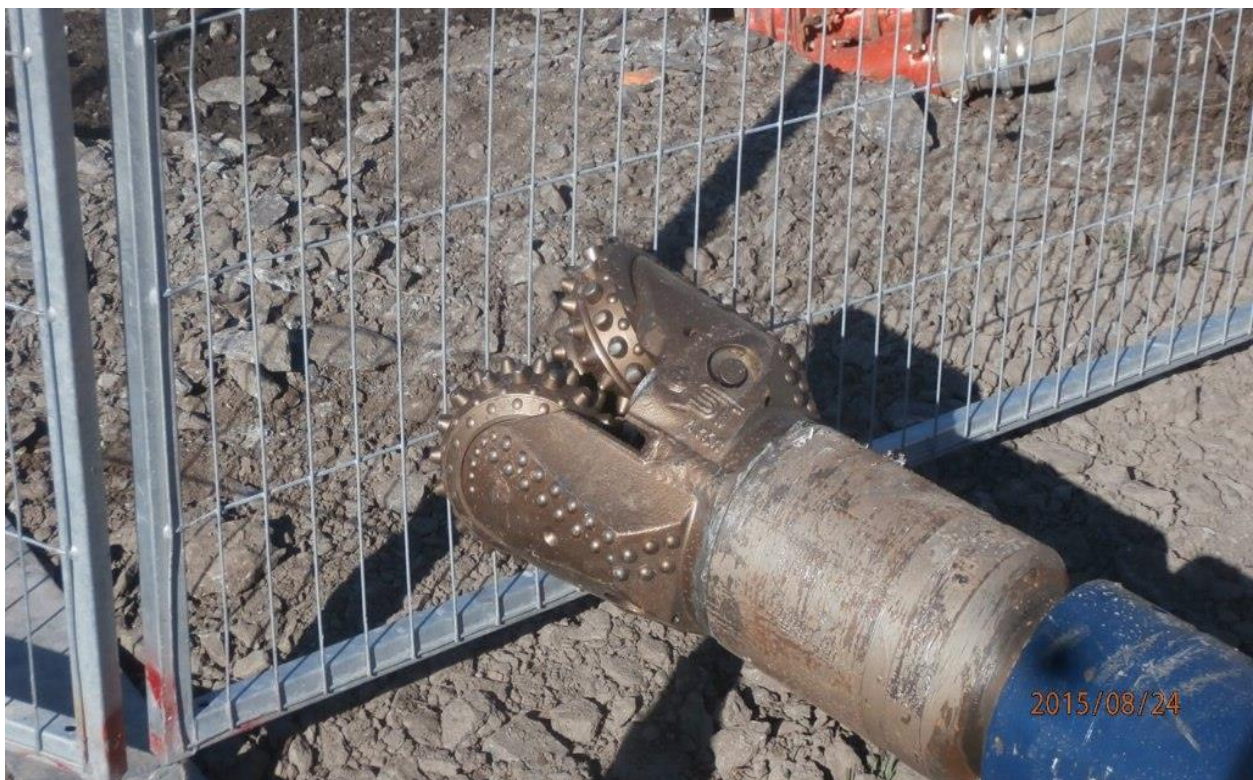
Due to the proximity of construction to residences on Seros Road, a sound mitigation wall was erected



The directional drill machine was set at a precise angle to follow the design of the drill.



A front view of the drilling rig. A bore pit is excavated where the drill enters the ground to contain the drill fluids which will be recycled.



The drill bit used is designed to bore through rock. It is equipped with a GPS tracking system that allows the operators to accurately pinpoint the location of the drill bit.



This view of the drilling operation shows the mud tanks and shakers where the rock is separated from the mud so the mud can be recycled back through the drill rod.



A close up view of the shakers. The first shaker removes the larger rocks/cuttings with the process continuing until the very fine rocks are removed leaving only the mud to be recycled