

January 25, 2018

BY RESS & Courier

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

Dear Ms. Walli:

**Re: Union Gas Limited (“Union”)
Panhandle Reinforcement Project
Board File EB-2016-0186**

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

Sincerely,

[original signed by]

Shelley Bechard
Administrative Analyst, Regulatory Projects
:sb
Encl.

cc: Zora Crnojacki
Nancy Marconi
Regulatory Library

PANHANDLE REINFORCEMENT PROJECT

POST CONSTRUCTION REPORT

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

December 2017

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1.0 INTRODUCTION

This Post Construction Report is provided in compliance with the Ontario Energy Board (“OEB”) Order EB-2016-0186 granting Union Gas Limited (“Union”) “Leave to Construct” approximately 40 kilometres of Nominal Pipe Size (NPS) 36 inch diameter steel natural gas pipeline and ancillary facilities in the Township of Dawn-Euphemia, Township of St. Clair and the Municipality of Chatham-Kent.

The pipeline was constructed as a “lift and lay” which involved the removal of an existing NPS 16 pipeline and the installation of a new NPS 36 pipeline generally within the same easement. Construction commenced at Union’s Dawn Compressor Station in the township Dawn-Euphemia and proceeded southeast within the existing cross country easement approximately 40km to Union’s Dover Transmission Station in the Municipality of Chatham-Kent. Significant features crossed by the pipeline include, the Sydenham River, Hwy 40, Little Bear Creek and the village of Grande Pointe. 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 OEB in its Order dated February 23, 2017 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 OEB’s Decision and Order in EB-2016-0186 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 OEB of any proposed change to OEB-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 OEB. In the event of an emergency, the OEB 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 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'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 Panhandle Reinforcement Project on February 23, 2017. Construction was initiated on May 25, 2017 with the pipeline placed into service on November 11, 2017. Cleanup and land restoration along the pipeline corridor was halted for the year on December 8, 2016, cleanup and land restoration will continue in spring 2018.

Construction progressed from Union's Dawn Compressor Station to Union's Dover Transmission Station in a southwesterly direction with the following order of operations: staking, clearing, topsoil stripping, grading, trenching, removal of the NPS 16 pipeline, backfilling, stringing, welding, joint coating, directional drilling, trenching, lowering-in, tie-ins, back filling, testing and initiation of clean-up.

Union will return to the right-of-way in spring 2018 to complete the following activities: Cleanup, land restoration, repair any subsidence, ensure 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-2016-0182 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 will restore 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 OEB of any proposed change to OEB-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 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 the Board-approved construction or restoration procedures on May 9, 2017 (additional information provided May 18, 2017) and August 22, 2017. Union received Board approval for the two (2) changes on May 26, 2017 and August 24, 2017 respectively. 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 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'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-2017-0186 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;

Table 1 summarizes the impacts, outstanding concerns and actions taken or planned to be taken to mitigate any identified impacts.

- iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;

Table 1 summarizes the impacts, outstanding concerns and actions taken or planned to be taken to mitigate any identified impacts.

- 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:

St. Clair Region Conservation Authority

- Watercourse Crossings – Development, Interference With Wetlands and Alterations to Shorelines and Watercourses Permit – FA#11197

Lower Thames Valley Conservation Authority

- Dover Transmission Station Expansion - Development, Interference With Wetlands and Alterations to Shorelines and Watercourses – Permit No. 032-2017
- Watercourse Crossings – Development, Interference With Wetlands and Alterations to Shorelines and Watercourses Permit

Permit No.	Type (AC/SC)	Method of Crossing
211-2016	SC-35	Open Cut
212-2016	SC-36	Open cut
213-2016	SC-37	Open cut
214-2016	SC-42	Open cut
215-2016	SC-42A	Open cut
216-2016	SC-43	Open Cut

Essex Region Conservation Authority

- Mersea Gate Station Expansion – Development, Interference With Wetlands and Alterations to Shorelines and Watercourses Permit #301-17

Ministry of Tourism, Culture and Sport

- Archaeology clearances under the MTCS File Numbers 0004035 and 0006302

Project Information Form Number	Stage	Location
P256-0388-2015	1	Project Area
P256-0401-2016	2	Project Area
P256-0486-2017	2	Additional Lands – Sydenham River
P256-0489-2017	2	Additional Lands
P256-0487-2017	2	Mersea Gate
P256-0414-2016	3	1
P256-0411-2016	3	2
P256-0413-2016	3	3
P256-0409-2016	3	5
P256-415-2016	3	7
P256-412-2016	3	8
P256-410-2016	3	13
P256-0423-2016	3	18
P256-0422-2016	3	19
P083-0276-2016	3	22
P083-0298-2016	3	23
P256-0450-2016	4	1
P256-0421-2016	4	2
P256-0449-2016	4	7
P256-0476-2016	4	8
P256-0477-2016	4	22

Fisheries and Oceans Canada (DFO)

- Species At Risk Act – Permit No. 16-HCAA-01491 issued under Section 73.
- Species At Risk Act – Implementation of mitigation measures to avoid and mitigate impacts to fish and fish habitat (Letter of Advice) – File No. 16-HCCA-01491.
- Three (3) site visits were completed by DFO staff during construction, no orders or recommendations were received as a result of these visits.

Ministry of Natural Resources (MNR)

- Endangered Species Act – Recommendations of mitigation measures to likely not contravene section 9 (species protection and/or section 10 (habitat protection) of the Endangered Species Act (Letter of Advice) – File number AYL-L-098-16.

Ministry of the Environment and Climate Change (MOECC)

- Permit to Take Water, Construction Dewatering – Surface and Ground Water, Permit No. 8334-AKPH8V.
- Permit to Take Water, Hydrostatic Test – Surface and Ground Water, Permit No. 1570-AH9QNS.
- An MOECC site inspection occurred on September 12, 2017 to assess compliance to Permit No. 8334-AKPH8V. The MOECC issued a Permit to Take Water Inspection Report (Ref# 6641-AR4H3G) on December 1, 2017, which identified two (2) action items and that the two (2) action items have been previously addressed and will be closed.
- The action items identified by the MOECC inspection were as follows:

1. Within 30 days of receiving this report, provide the undersigned Officer with a procedure to ensure samples of discharge water are obtained in accordance with Condition 4.5 of Permit to Take Water approval number 8334-AKPH8V, and will be submitted for analysis of the identified parameters.
2. Within 30 days of receiving this report, provide the undersigned Officer with a procedure to ensure samples of discharge water are analysed in accordance with Condition 4.5 of Permit to Take Water approval number 8334-AKPH8V.

- The procedures requested by the MOECC were developed and submitted to the undersigned Officer on September 22, 2017.

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, Stage 3 and Stage 4 sites identified within the project area.

At three (3) locations along the project the identified archaeological sites extended beyond the project area and were not fully cleared of cultural resources beyond the project area. At these locations protective fence was installed along the project area, which was monitored by a registered professional archaeologist to ensure there was no encroachment or potential damage to the adjacent un-cleared area.

3.4.1.1 **Watercourse Monitoring**

It was necessary to cross forty-five (45) watercourses as part of the Project. Eight (8) of the watercourses were identified as closed tile drains that did not require permitting, the remaining thirty-seven (37) were reviewed and permitted by St. Clair Conservation Authority or Lower Thames Valley Conservation Authority.

Two (2) watercourses were crossed using the horizontal directional drill (HDD) technique and the remaining forty-three (43) 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 and approvals.

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 or stabilized with geo-tech fabric and rip-rap (as per the requirements of the Municipality of Chatham-Kent) sediment fencing was also installed until the adjacent land was restored to pre-existing conditions.

All watercourse crossings were monitored during construction by an Environmental Inspector and all watercourses will be inspected in the spring of 2018 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 and erosion control measures.

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 present throughout the project areas with the exception of a few properties.

A construction protocol to deal with potential SCN impacted fields was developed and implemented with input from professional soil scientists, the Ontario Ministry of Agriculture, Food and Rural Affairs and landowners reduce the risk of transferring SCN. The protocol included the installation of equipment wash stations and thoroughly washing machinery and equipment moving from a positive SCN location to a Negative SCN.

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 500 m of the HDD locations. 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.

Pre-construction water quality samples were collected by Stantec. In total, fifteen (15) water quality samples were collected from fifteen (15) supply 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. Stantec provided the residents with a summary letter of the results and with the contact information for the public health unit for those wells that water quality results indicated ODWS MAC exceedances.

During and post construction additional water well sampling was completed at the request of the well owner or in the event of a complaint. A total of seven (7) wells were sampled through this process, two (2) were sampled in association with complaints and five (5) were sampling requests. The five wells sampled at the request of the well owners were

sampled on two occasions, during and after the HDD installation at Little Bear Creek. Of the two well samplings for complaints, one complaint was resolved and one remains open.

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. Six (6) SAR or their habitats were identified within the project area, not including those in Little Bear Creek and the Sydenham River as they were avoided by installing the pipe via HDD. The six SAR included: Bobolink, Eastern Meadow Lark, Dense Blazing Star, Eastern Foxsnake, Pugnose Minnow and Pugnose Shiner.

All required SAR permits and approvals were obtained and all avoidance/mitigation measures were completed. During the construction of the project three (3) new SAR records were identified within the project area, these records included two (2) species, Lake Chubsucker and Mapleleaf Mussel. Notifications of the new records were made to both DFO and MNRF.

3.4.1.6 Tree Removal

Tree removal was initiated on February 13th, 2017 and was completed on March 31st, 2017 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 2018 and will likely continue into 2019.

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.

Clean-up and land restoration of the pipeline route will continue in the spring of 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	Pipeline construction may be disruptive to landowners and farming operations	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	- Surveying may be disruptive to the landowners - Crop and woodlot damage	- 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	Vehicular traffic may cause soil rutting, compaction or mixing	- Permits from the local Conservation Authority, MNRF and DFO 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	The removal of trees	- 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	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.	- Broken tiles were repaired as per Specification CSPL-18 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 CSPL-04 and CSPL-05 - 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

Activity	Effects	Mitigation Measures
f) Stringing	Stringing trucks may impact soil productivity due to soil compaction, rutting and mixing	Specification CSPL-11 was followed.
g) Trenching	Trenching may disrupt tile drains and cause soil mixing (topsoil and subsoil mixing), which may impact soil productivity.	- Trenching followed Specification CSPL-06 - Prior to trenching, topsoil was separated from subsoil as per Specifications CSPL-04 and CSPL-05.
h) Watercourse Crossings	Damage to aquatic habitats and disruption or death of aquatic species	- Watercourse crossings were completed using specification CSPL-08 - Qualified biologists were present during the initiation of the watercourse crossings to capture and rescue aquatic organisms from the construction area in accordance with permits and approvals.
i) Backfilling	Improper backfilling may cause topsoil/subsoil mixing	Specification CSPL-17 was followed.
j) Hydrostatic Testing	Discharge of hydrostatic test water may cause erosion at the point of discharge	- 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.
k) Site Restoration	Improper site restoration may affect soil productivity	- Restoration followed Specification CSPL-19 and CSPL-08 for watercourse crossings - Disturbed areas were restored by re-grading, followed by chisel ploughing and/or sub-soiling 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
l) Fuel Storage and Handling	Improper fuel storage and handling may cause spillage and possible contamination of soil	- Fuel was not stored near watercourses or wetlands (i.e. within 50 m) - Fuel storage areas were clearly marked - Spill clean-up material (i.e. absorbent pads) were stored on-site and available at all times

Activity	Effects	Mitigation Measures
m) Liquid and Solid Waste	Liquid waste, solid waste, and lubricants must be properly handled, stored and disposed of to avoid potential contamination of the surrounding area	Liquid and solid wastes were properly stored, handled, and disposed of at an approved location
n) General	i) Fences	Fences were repaired to Specification CSPL-01

Table 2

Summary of Landowner Complaints Panhandle Reinforcement Pipeline Project

SUMMARY OF LANDOWNER COMPLAINTS

Panhandle Reinforcement NPS 36

Date	Property Identification Number	Complaint	Resolution	Status
April 7 th , 2017	NA	Non-impacted Landowner (LO) reported unauthorized truck turning and parking in private parking lot. Offered use of areas with agreement. If no agreement, please address/mitigate issue.	Apr 11/17 Contractor made signs ("Banister No Entry") and posted them on barrels in church parking lot. Sept 15/17 LO reports dump trucks parking/waiting in private parking lot and in front of house. LRA followed up with Contractor who contacted lead of dump truck hauling with instructions not to use said parking areas at all.	Resolved September 15 th , 2017
July 15 th , 2017	P124	Landowner complained re: construction proceeding in wet conditions. Reported mats floating, rutting off mats.	UG Superintendent addressed issues with Contractor and UG Inspection and instructed Contractor to not work in wet conditions. Remediation plan in place and follow up discussions took place. Meeting held with LO, LRA on July 29/17. LO satisfied with all.	Resolved July 29 th , 2017
August 4 th , 2017	P95 P96	LRA received text message from landowner complaining about the noise and vibration from the HDD boring activities running 24/7 on the southside of Sydenham River (HDD site approx. 235 metres away from the house).	LRA received call from CAEPLA Representative stating they received a call from landowner complaining about the compensation for the noise and vibration. LRA advised CAEPLA representative they spoke with landowner stating that they were paid disturbance in Temporary Land Use Agreement which covers any inconvenience for disruption caused by the Panhandle Pipeline Construction; advised CAEPLA rep.	Resolved August 12 th , 2017

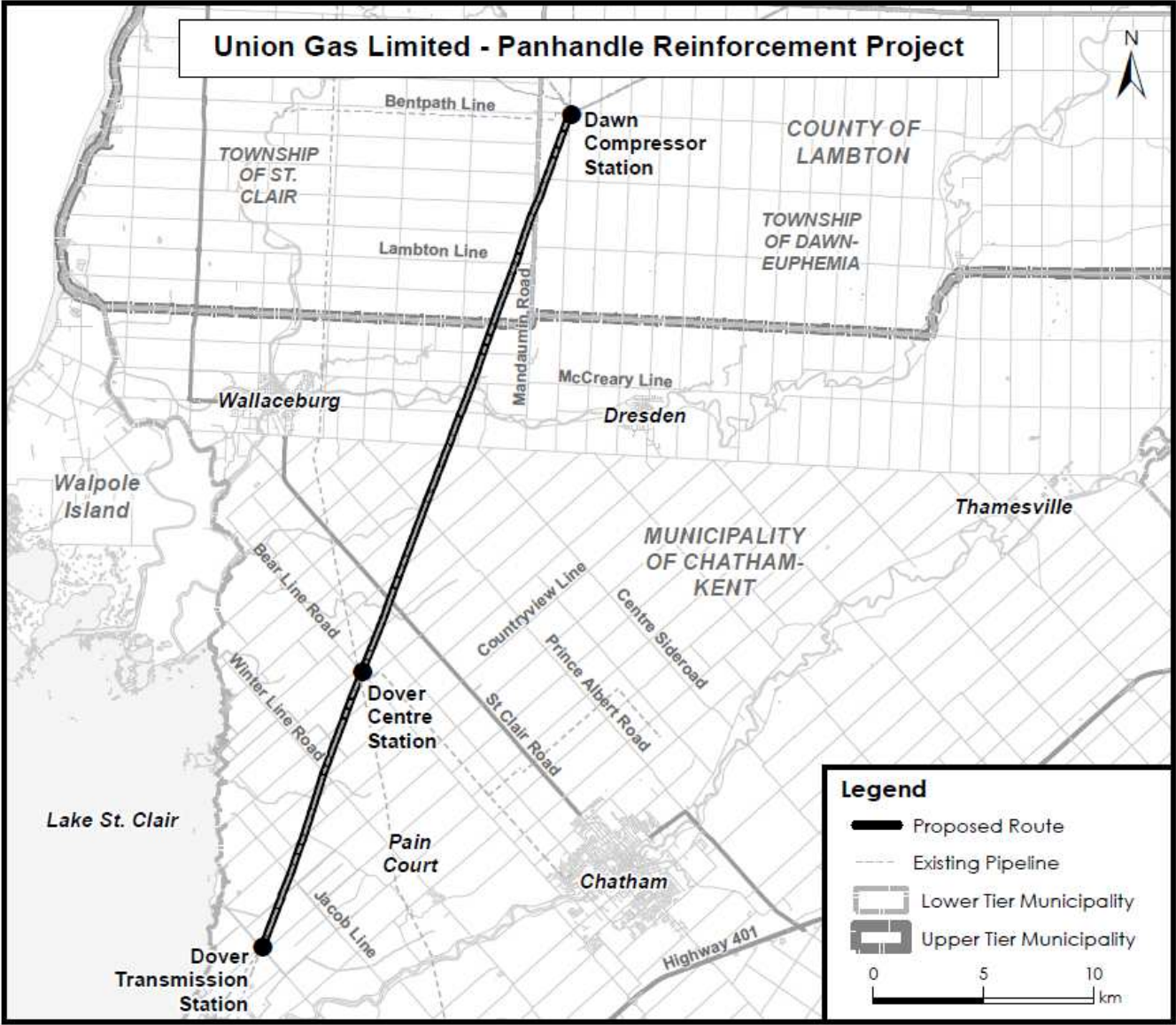
Date	Property Identification Number	Complaint	Resolution	Status
September 5 th , 2017	P89	LRA received phone call from P89 landowner claiming neighbour's water well has gone dry. LRA spoke with neighbouring landowner. Claiming water well levels have been decreasing over the past couple of weeks; not sure why but thinks partly due to the Panhandle pipeline construction activities.	Stantec Hydrogeologist completed an assessment of the water well and determined well issue not related to current Panhandle Construction. LRA advised landowner that UG will pay for potable water as required and a new pump to replace burnt-out pump, replacement pump solved the issue. Invoice from landowner for new pump and technicians time received and paid for.	Resolved September 27th, 2017
September 23 rd , 2017	BOP 102	Landowner complained about water quality and black sediment present over the last few weeks. Said they have had same experience years ago but again only recently and they assumed it was from the recent 2017 Panhandle Pipeline construction activity. Landowner also complained of damage to brick work at one location on the house.	Sept 29/17 Stantec determines water quality issues not related to Union Gas construction (per Report dated Oct 11/17). Nov 24/17 Wood/AMEC provides property condition survey report with the opinion that pipeline construction was unlikely to have impacted house but instead issues were potentially a result of corrosion of metallic ties or insufficient ties from the construction of the house, or a combination of both. Dec 5/17 Met with LO's to review water well concerns and brick wall concerns. Well water concerns, Union agreed to work with LO and LO's well specialist to mitigate water quality concerns and to continue to supply potable water. LRA delivered 15 cases of bottled water to date. LO reports having 3-4 cases remaining. Union Gas continues to communicate with the landowner and remains committed to achieving a resolution.	Currently Un-resolved

Appendix A

General Location Map

GENERAL LOCATION MAP

PANHANDLE REINFORCEMENT PROJECT



Appendix B1

Conditions of Approval

Leave to Construct Conditions of Approval
Application under Sections 90 of the OEB Act
Union Gas Limited
EB-2016-0186

1. Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2016-0186 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 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 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 OEB of any proposed change to OEB-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 OEB. In the event of an emergency, the OEB 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 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'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 9, 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")
Panhandle Reinforcement Project
Board File # EB-2016-0186**

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

Union believes that these changes 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 519-436-4601.

Sincerely,

(original signed by)

Mark A. Murray J.D.
Manager, Regulatory Projects & Land Acquisition

cc: Karen Hockin
Zora Crnojacki, OEB

REQUEST TO VARY

Project Name: Panhandle Reinforcement Project

OEB File Number: EB-2016-0186

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.

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, from the landowners.

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, 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 Tab 11 Schedule 1, and the bottom half of each map identifies the additional Land Rights requested.

Ontario Energy
Board
P.O. Box 2319
27th. Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416-481-1987
Facsimile: 416-440-7856
Toll free: 1-888-632-6273

Commission de l'énergie
de l'Ontario
C.P. 2319
27e étage
2300, rue Yonge
Toronto ON M4P 1E4
Téléphone: 416-481-1987
Télécopieur: 416-440-7856
Numéro sans frais: 1-888-632-6273



BY E-MAIL

May 26, 2017

Union Gas Limited
Mark A. Murray J.D.
Manager, Regulatory Projects and Land Acquisitions
50 Keil Drive North
P.O. Box 2001
Chatham ON N7M 5M1
mmurray@uniongas.com

Dear Mr. Murray:

**Re: Panhandle Reinforcement Project – EB-2016-0186
Request to Vary
Change Request No. 1**

The Ontario Energy Board (OEB) is in receipt of your letters dated May 9, 2017 and May 18, 2017 where Union Gas Limited (Union) advised the OEB of a change to the Panhandle Reinforcement Project (Change Request No. 1).

The change pertains to the dimensions and locations of permanent easements and temporary land use areas (Land Rights) which resulted in the need to acquire additional Land Rights at various locations along the approved pipeline route. Union acquired all of the additional Land Rights and filed copies of agreements signed by landowners directly affected by the proposed change. The form of easement agreements for the additional Land Rights was approved by the OEB in its February 23, 2017 Decision and Order in Union's Panhandle Replacement Project.

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-2016-0186 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 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



August 22, 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")
Panhandle Reinforcement Project
Board File # EB-2016-0186**

Please find attached Change Request 2, 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 519-436-4601.

Sincerely,

Mark A. Murray J.D.
Manager, Regulatory Projects & Land Acquisition

cc: Karen Hockin
Zora Cmojacki, OEB

REQUEST TO VARY

Project Name: Panhandle Reinforcement Project

OEB File Number: EB-2016-0186

Change Request: 2

Description and Rationale for Change

Union requesting additional temporary land use areas ("Land Rights"), from an individual landowner at the location identified in green on the map attached at Schedule 1.

Construction and Restoration Practices

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

Environmental

Silt fencing to be placed adjacent to the water course during use of this access.

Consultation

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

Lands

Union has acquired the necessary temporary land rights, from the landowner.

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 map setting out the additional Land Rights is identified in green at Schedule 1.

Ontario Energy Board
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BY E-MAIL

August 24, 2017

Union Gas Limited
Mark A. Murray J.D.
Manager, Regulatory Projects and Land Acquisitions
50 Keil Drive North
P.O. Box 2001
Chatham ON N7M 5M1
mmurray@uniongas.com

Dear Mr. Murray:

**Re: Panhandle Reinforcement Project – EB-2016-0186
Request to Vary
Change Request No. 2**

The Ontario Energy Board (OEB) is in receipt of your letter dated August 22, 2017 where Union Gas Limited (Union) advised the OEB of a change to the Panhandle Reinforcement Project (Change Request No. 2).

The change pertains to an additional temporary land use area in the south-east corner of Oldfield Line and Prince Albert Road. Union acquired additional Land Rights and filed a copy of the agreement signed by the landowner directly affected by the proposed change. The form of easement agreement for the additional Land Rights was approved by the OEB in its February 23, 2017 Decision and Order in Union's Panhandle Replacement Project.

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 proposal will result in material changes to the leave to construct granted by the OEB in the EB-2016-0186 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 project's construction methods, costs or schedule. Union has secured the necessary temporary Land Rights. Union stated it will use silt fencing adjacent the watercourse during use of this temporary access. Union is reminded that other environmental protection measures for work in the vicinity of aquatic features may apply as described in EB-2016-1086, Exhibit A, Tab 10, Schedule 1, pages 48-49.

- 2 -

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



Panhandle Reinforcement Project

EB-2016-0186

Decision and Order

February 23, 2016

I hereby certify Union Gas Limited has complied with the Decision and Order, Appendix B, EB-2016-0186, Section 6 (a) (i).

Jan 24, 2018

Date



Senior Executive

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 OEB's Decision and Order in EB-2016-0186 and these Conditions of Approval.



Panhandle Reinforcement Project

EB-2016-0186

Decision and Order

February 23, 2016

I hereby certify Union Gas Limited has complied with the Decision and Order, Appendix B, EB-2016-0186, Section 6 (a) (v).

Jan 24, 2018

Date



Senior Executive

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.

Appendix C

Photograph Inventory



Tree clearing prior to the breeding bird window to prepare the construction easements



Topsoil stripping to prepare and protect the land for the construction of the pipeline.



Hydro seeding of topsoil piles was completed at select location, based on topsoil type, to reduce erosion and weed growth.



Typical temporary bridge crossing used for the Panhandle Reinforcement Pipeline Project.



Automatic welding the pipeline joints together.



Pipeline lowered in ready for backfill, beside work area utilizing rig mats.



Pipe backfilling.



Fish rescue prior dewatering construction area as part of the typical watercourse crossing procedure.



Trenching through an isolated watercourse crossing.



Restored watercourse crossing following pipeline installation.



Restored Watercourse crossing following seeding establishment.



Pull top soil to restore agricultural lands.



Topsoil leveling.



Restored agricultural land of a formally wooded area.



Restored agricultural land following cover crop seeding.



Cover crop seeding on restored agricultural land following germination.



Stantec technician downloading vibration monitor at the Hwy 40 bore site. Completed as part of the MOECC Permit to Take Water.



Species at Risk – Eastern Foxsnake identified off construction easement on nearby road. Snake was directed off the road unharmed.



Species at Risk – 1 of 2 new records of Lake Chub Sucker identified at watercourse crossings during construction.



Species at Risk –new record of Mapleleaf Mussel identified at 1 watercourse crossing during construction.