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**By RESS & Courier**

February 18, 2015

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

Dear Ms. Duguay:

**Re: Union Gas Limited  
Dawn Parkway NPS 48 Replacement (Flamborough)  
Board File # EB-2013-0284**

Pursuant to Condition 3.1 & 3.3 of the Board's Conditions of Approval for the above noted project, please find enclosed four copies of the Final Monitoring Report.

Sincerely,

*[original signed by]*

Shelley Bechard  
Administrative Analyst, Regulatory Projects  
Encl.

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

P. O. Box 2001, 50 Keil Drive North, Chatham, ON, N7M 5M1 [www.uniongas.com](http://www.uniongas.com)

Union Gas Limited

**Union Gas Highway 6 Pipeline  
Replacement: Final Monitoring  
Report**



Prepared for:

**Union Gas Limited**  
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Prepared by:

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File No. 160960855  
February 12, 2015

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

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## Executive Summary

Union Gas Limited ("Union Gas") completed a scheduled assessment of its 48 inch diameter Dawn Parkway Pipeline in September 2012. The assessment determined that a section located underneath Highway 6, between Lot 11, Concession 7 and Lot 13, Concession 9, Hamilton, Ontario needed to be replaced. Stantec Consulting Ltd. ("Stantec") was retained by Union Gas to complete an Environmental Review of the proposed work. Based on the review, and implementing the recommended mitigation measures, pipeline relocation activities were not anticipated to have significant or adverse environmental or socio-economic impacts.

Union Gas filed an application with the Ontario Energy Board on August 9, 2013 to relocate a 70m section of NPS 48 inch pipeline and received Decision and Order EB-2013-0284 on August 23, 2013. Construction activities began during the first week of September 2013 and gas service resumed on November 13, 2013.

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

## Abbreviations

|           |                                    |
|-----------|------------------------------------|
| Act       | Ontario Energy Board Act, 1998     |
| MTO       | Ontario Ministry of Transportation |
| NPS       | Nominal Pipe Size                  |
| Board     | Ontario Energy Board               |
| Stantec   | Stantec Consulting Ltd.            |
| Union Gas | Union Gas Limited                  |

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

Background  
February 12, 2015

## 1.0 Background

In September 2012 a scheduled integrity inspection of the Dawn Parkway 48 inch diameter pipeline identified the need to replace a section located underneath Highway 6, between Lot 11, Concession 7 and Lot 13, Concession 9 in Hamilton, Ontario. The inspection revealed pipeline integrity issues.

Stantec was retained by Union Gas to conduct an Environmental Review in support of an application with the Ontario Energy Board (the "Board"). The Environmental Review determined that if the recommended mitigation measures were employed that no significant or adverse environmental or socio-economic impacts would result from the proposed work.

Union Gas filed an application with the Board on August 9, 2013, under section 95 of the *Ontario Energy Board Act, 1998* (the "Act"), requesting an exemption from the requirements of Section 90 of the Act for an Order granting leave to construct a natural gas pipeline in the City of Hamilton. Union proposed to replace approximately 70 metres of the Dawn Parkway NPS 48 pipeline in the vicinity of Lot 11, Concession 7 and Lot 13, Concession 9 in the City of Hamilton (formerly Town of Flamborough). Union proposed to abandon approximately 45 metres of the existing pipeline and construct a new portion of pipeline immediately adjacent to the existing pipeline and within the same easement.

## 1.1 SCOPE OF THE FINAL MONITORING REPORT

This report has been prepared in accordance with the Board EB-2013-0284 Board Staff Conditions of Approval as described below:

- Condition 1.1** Union Gas shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2013-0284, and approved in this Order and these Conditions of Approval.
- Condition 1.3** Union Gas shall implement all the recommendations of the Environmental Review filed in the pre-filed evidence.
- Condition 1.4** Union Gas shall advise the Board'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 Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

Background  
February 12, 2015

- Condition 3.1** Both during and after construction, Union Gas shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union Gas 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 3.3** 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.
- Condition 5.1** Union Gas shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, shall provide a list thereof, and shall provide copies of all such written approvals, permits, licences, and certificates upon the Board's request.

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

Predicted Impacts and Mitigation  
February 12, 2015

## 2.0 Predicted Impacts and Mitigation

### 2.1 CONDITION 1.1

**Condition 1.1** Union Gas shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2013-0284, and approved in this Order and these Conditions of Approval.

Construction of the pipeline replacement was completed as per the application and evidence filed in EB-2013-0284 with exception to how the pipeline was installed beneath Highway 6. Auger boring was indicated as the preferred method for pipeline installation, however, the method was changed to "pipe ram". Information regarding the change in method is described in Section 2.3.

The pipeline resumed service on November 13, 2013 and cleanup began immediately thereafter. Perimeter silt fencing remained in place over the winter to protect the surrounding natural features from sedimentation. The pipeline trench was backfilled with native soil and crowned to allow for settling. Since construction activities were completed in late fall, re-seeding / re-vegetation was completed in the spring of 2014. The site was re-seeded / re-vegetated as per Permit #4426 issued by Conservation Halton. Bare areas will be re-seeded in the spring of 2015.

### 2.2 CONDITION 1.3

**Condition 1.3** Union Gas shall implement all the recommendations of the Environmental Review filed in the pre-filed evidence.

**Table 2.1: Environmental Review Recommendations**

| Recommendation  | How the Recommendation was Implemented  |
|---|---|
| Consultation with Conservation Halton to determine whether work zones overlap with any regulated lands.   | Received approval and conditions from Conservation Halton (Permit #4426) on September 5, 2013.  |
| Confirm the depth to water prior to commencing the replacement. A permit to take water will be required if groundwater taking exceeds 50,000 L/day. | Received a permit to take water (Number 3688-9BDHKX) on September 9, 2013.<br>Permit Number 3688-9BDHKX replaced with Permit Number 8351-9C4Q3G on October 2, 2013. (The permit issued on October 2 <sup>nd</sup> allowed Union Gas to mitigate increased volumes of groundwater entering the pipeline trench). |
| Avoid disturbance to wetland areas; where avoidance is possible, a permit under O. Reg 162/06 will be required.                                     | A map outlining the limits of disturbance was provided to Conservation Halton. Received approval and conditions from Conservation Halton (Permit #4426) on September 5, 2013.   |



# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

Predicted Impacts and Mitigation  
February 12, 2015

**Table 2.1: Environmental Review Recommendations**

| Recommendation  | How the Recommendation was Implemented   |
|---|--|
| Notification to the City of Hamilton is provided for the planned activities.  | The City of Hamilton was notified of the proposed construction activities.   |
| Review of landowner information to determine if Infrastructure Ontario owns/manages the property on which the electrical towers are located (an easement would be required from Infrastructure Ontario if their environmental assessment process is triggered). | Union Gas reviewed landowner information and contacted Infrastructure Ontario. Infrastructure Ontario indicated that their environmental assessment process was not required.  |
| Avoid vegetation clearing during the migratory bird nesting period (May 1 – July 31).   | Vegetation was cleared during September, outside of the May 1 to July 31 window. No nests were impacted by vegetation clearing activities.   |
| Union Gas should work with Stantec and the Ministry of Natural Resources to avoid habitat where possible, to develop mitigation and protective measures as appropriate to ensure compliance with the Endangered Species Act.                                    | <p>The potential to observe Species at Risk in the workspace was highlighted during employee site orientation. Posters, including photos and species information, were displayed in common areas at the site (ie: site trailer). Due diligence measures, such as inspecting heavy equipment and site walks, were communicated regularly during "tailgate" meetings.</p> <p>Union Gas retained Stantec (qualified biologist) to assist should any potential species at risk be observed in the workspace.</p> |

## 2.3 CONDITION 1.4

**Condition 1.4** Union Gas shall advise the Board'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 Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.

Auger boring, as indicated in the application with the Board, was the preferred method of pipeline installation beneath MTO Highway 6. This was changed to a pipe ram method due to unexpected ground conditions and the undermining of previously disturbed soil creating a potential safety risk. Once safety became a potential risk, the above change was required to the construction method.

During installation of the pipe, it was observed that the paved highway surface had subsided approximately one inch, in a narrow area above the pipe. Working with MTO, Union gas installed a temporary pavement repair to avoid a hazardous traffic situation and monitored subsidence levels. After pipe installation was complete, a permanent pavement repair was installed to MTO's satisfaction and monitoring continued until November 2014, with no further subsidence observed.

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

Predicted Impacts and Mitigation  
February 12, 2015

## 2.4 CONDITION 3.1

**Condition 3.1** Both during and after construction, Union Gas shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union Gas 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.

### Final Monitoring Report

Four copies of this Final Monitoring Report are provided to the Board.

### Log of Complaints

No complaints were filed.

## 2.5 CONDITION 3.3

**Condition 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.

Full site reclamation occurred in the spring of 2014 and included:

- Removal of temporary gravel roadways;
- Removal of perimeter silt fencing;
- Final grading; and,
- Re-seeding;

A site visit occurred on October 7, 2014 to inspect site reclamation activities that were completed in the spring of 2014. All geotextile material placed under temporary gravel roadways east and west of Highway 6 was removed. The use of this material is intended to facilitate the removal of gravel and to protect the underlying native soils from compaction during construction activities. No excess imported gravel material at temporary roadway locations was observed. While there was standing water noted, compaction was not noted to be a concern on the site.

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

Predicted Impacts and Mitigation  
February 12, 2015

All perimeter silt fencing east and west of Highway 6 was removed. Additionally, no construction materials or construction related debris were observed on site.

Sediment tanks and sediment filter bags used during construction appear to have worked well for the lowering of the water table and dewatering the construction site as no sediment was observed within the area where water was discharged. No soil scouring or erosion was found in the vicinity of the discharge area.

Final grading was completed and soil was re-graded to final contours. Grades appeared to be appropriate and followed the contours of the surrounding area. Minor rutting was observed in a small area on the east side of Highway 6. However this minor rutting does not appear to have effected rehabilitation as vegetation was established and no ponding of water was observed in that area.

The site was re-vegetated as per Conservation Halton Permit #4426 with specific reference to the seed mixture indicated in the permit. Vegetation establishment on the east side of Highway 6 was successful with good growth observed. Some bare spots were observed on the west side of Highway 6, at the access road and the spoil pile locations. These are low lying areas where it appears seasonal flooding occurs. It is recommended that these areas be reassessed in the spring of 2015 and seed reapplied at that time, if necessary.

## 2.6 CONDITION 5.1

Condition 5.1 Union Gas shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, shall provide a list thereof, and shall provide copies of all such written approvals, permits, licences, and certificates upon the Board's request.

**Table 2.2: All other Approvals, Permits, Licences and Certificates**

| Agency                                 | Permit Number / Name  |
|--|---|
| Conservation Halton                    | Permit #4426 – Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.<br>(September 5, 2013) |
| Ministry of Environment                | Permit # 3688-9BDHKX – Permit to Take Water<br>(September 9, 2013)<br>Permit # 8351-9C4Q3G – Permit to Take Water<br>(October 2, 2013)      |
| Ministry of Tourism, Culture and Sport | Clearance Letter<br>(August 30, 2013)   |
| Ministry of Transportation             | Permit # EC-2013-20T-284 - Encroachment Permit<br>(September 10, 2013)  |
| Ministry of Transportation             | Permit # EN-2013-20T-14 and EN-2013-20T-15 Entrance Permits<br>(September 27, 2013)   |

## UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT


Conclusion  
February 12, 2015

### 3.0 Conclusion

This Final Monitoring Report has been prepared as per conditions in the Board Order EB-2013-0284. The report provides an outline of Unions' compliance with the commitments and the measures implemented during construction to minimize disturbance to the environment. It is anticipated that these measures will effectively mitigate long-term impacts to the environment.

Overall site rehabilitation appears to be successful. No additional grading or clean-up is required. It is recommended that bare areas where vegetation did not establish be observed in the spring and re-seeded as necessary.

#### STANTEC CONSULTING LTD.

Prepared by   
(signature)

**Michael Candido, B.Sc. (Env)**  
Environmental Scientist

Reviewed by   
(signature)

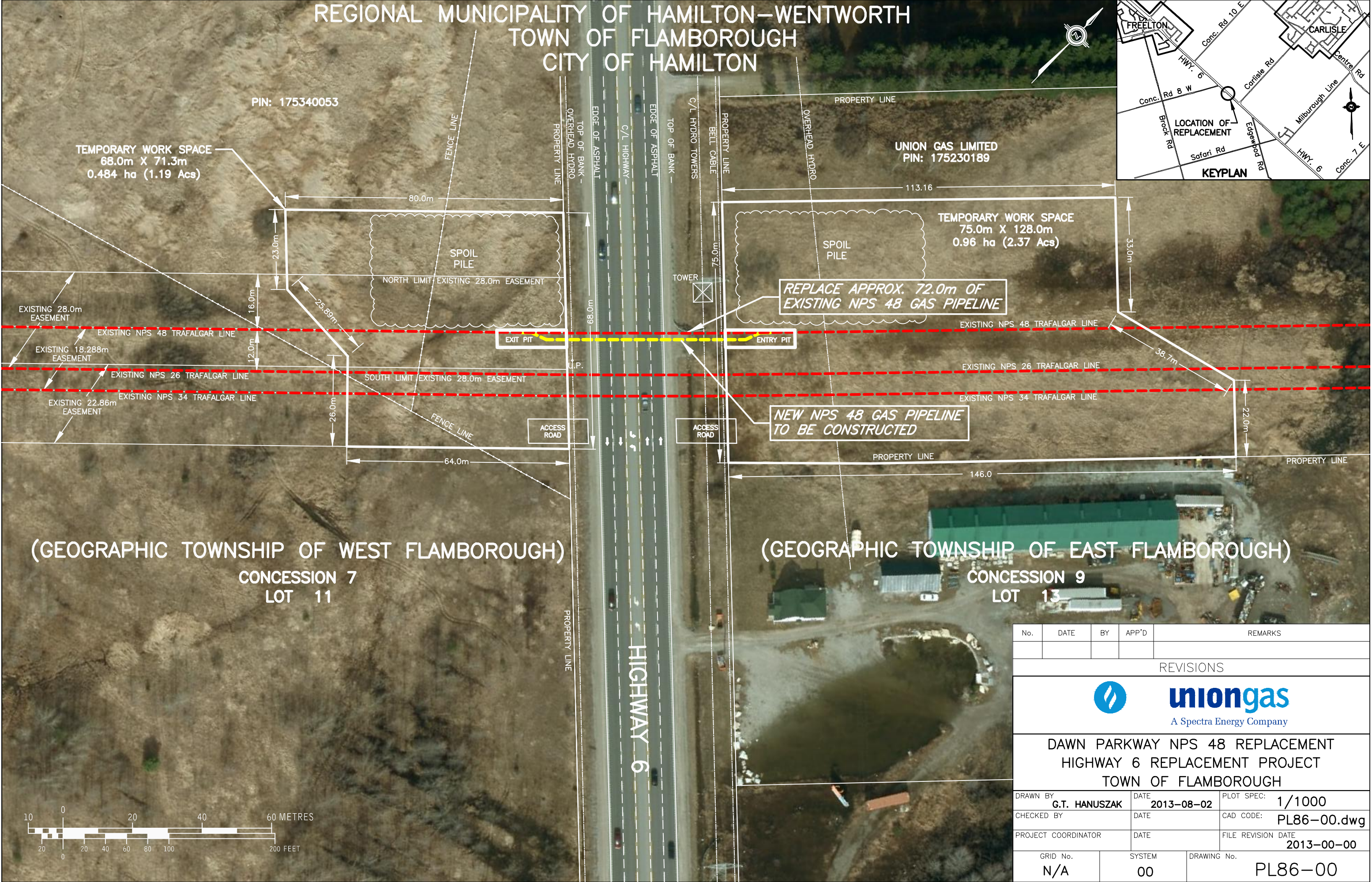
**Steve Thurtell, M.Sc., PAg., CISEC**  
Senior Project Manager


## **Appendix A:**

### **Site Map**



REGIONAL MUNICIPALITY OF HAMILTON—WENTWORTH  
TOWN OF FLAMBOROUGH  
CITY OF HAMILTON



| No.  | DATE | BY                        | APP'D | REMARKS                                 |
|--|------|---------------------------|-------|---|
| REVISIONS  |      |                           |       |   |
| <div><b>uniongas</b><br/>A Spectra Energy Company</div> |      |                           |       |   |
| DAWN PARKWAY NPS 48 REPLACEMENT<br>HIGHWAY 6 REPLACEMENT PROJECT<br>TOWN OF FLAMBOROUGH  |      |                           |       |   |
| DRAWN BY<br><b>G.T. HANUSZAK</b>   |      | DATE<br><b>2013-08-02</b> |       | PLOT SPEC:<br><b>1/1000</b>             |
| CHECKED BY   |      | DATE                      |       | CAD CODE:<br><b>PL86-00.dwg</b>         |
| PROJECT COORDINATOR  |      | DATE                      |       | FILE REVISION DATE<br><b>2013-00-00</b> |
| GRID No.<br><b>N/A</b>   |      | SYSTEM<br><b>00</b>       |       | DRAWING No.<br><b>PL86-00</b>           |



## **Appendix B:**

### **Site Photos**



Photo 1: October 7, 2014 – East side of Highway 6; facing east to entry pit.



Photo 2: October 7, 2014 – East side of Highway 6; facing east to construction area.



Photo 3: October 7, 2014 – East side of Highway 6; facing east along southern work space limit.



Photo 4: October 7, 2014 – East side of Highway 6; facing west to spoil pile.



Photo 5: October 7, 2014 – West side of Highway 6; facing east to access road.



Photo 6: October 7, 2014 – West side of Highway 6; facing east to exit pit.

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Photo 7: October 7, 2014 – West side of Highway 6; facing east to spoil pile.



Photo 8: October 7, 2014 – West side of Highway 6; facing west.



Photo 9: October 7, 2014 – West side of Highway 6; facing south- bare spot.

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**Appendix C:**  
**EB-2013-0284 Conditions of Approval**

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

## 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-2013-0284, and approved in this Order and these Conditions of Approval.
- 1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2013, unless construction has commenced prior to that date.
- 1.3 Union shall implement all the recommendations of the Environmental Review filed in the pre-filed evidence.
- 1.4 Union shall advise the Board'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 Board or its designated representative. In the event of an emergency, the Board 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 shall explain all significant variances from the estimates filed in the proceeding.

## 2 Project and Communications Requirements

- 2.1 The Board'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 Board'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 Board's Order being issued.
- 2.3 Union shall give the Board's designated representative and the Chair of the Ontario Pipeline Coordinating Committee ("OPCC") ten days written notice in advance of the commencement of the construction.
- 2.4 Union 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 Board's Order.
- 2.5 Union shall file with the Board'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 Board'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.

# UNION GAS HIGHWAY 6 PIPELINE REPLACEMENT: FINAL MONITORING REPORT

## **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 Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. 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 Easement Agreements**

- 4.1 Union shall file with the Board, prior to construction, all easement agreements related to the project.

## **5 Other Approvals and Agreements**

- 5.1 Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, shall provide a list thereof, and shall provide copies of all such written approvals, permits, licences, and certificates upon the Board's request.