



**Stantec**

**Pipeline to Serve York Energy  
Centre LP Final Post Construction  
Environmental Monitoring Report**

EB-2009-0187

*Prepared for:*

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May 28, 2013

Project No.: 160950255

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## Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Introduction  
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# 1 INTRODUCTION

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## 1.1 Background

Enbridge Gas Distribution Inc. (“Enbridge”) filed an application with the Ontario Energy Board (“the Board”) on September 3, 2009, under section 90 of the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Schedule B for an order granting leave to construct approximately 16.7 km of 406 mm (16 inch) diameter extra high pressure steel pipeline to deliver natural gas to the York Energy Centre LP (“YEC LP”) natural gas electrical generation facility (“the Project”). The Board assigned the application file number EB-2009-0187. The pipeline originated from Enbridge’s Schomberg Gate Station located at 4955 Lloydtown-Aurora Road in Pottageville, Ontario and terminated at YEC’s facility located at 18781 Dufferin Street in the Township of King, Ontario.

In support of the leave for construction and the application to the Board, Enbridge filed an Environmental Assessment (“EA”; Jacques Whitford Ltd., 2009) indicating a preferred route selection (see Appendix A), identifying potential impacts resulting from construction, and prepared mitigative measures to minimize environmental and socio-economic impacts.

In April of 2010, the Board granted Enbridge approval to construct the pipeline to supply natural gas to the YEC facility along the preferred route. Included in the Conditions of Approval, Enbridge was required complete a Final Monitoring Report to be filed with the Board within fifteen months of the in-service date. The in-service date was November 13, 2011, making the due date for the final report February 13, 2012. However, Enbridge requested an extension to the filing date for the report until May 2013 as it would be difficult to conduct a proper assessment during winter months and verify that there are no outstanding issues related to the project. The extension was subsequently granted by the Board.

## 1.2 Scope of the Final Monitoring Report

This report has been prepared in accordance with the Board EB-2009-0187 Board Staff Proposed Conditions of Approval as described below:

- 3.1 *Both during and after construction, Enbridge 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.*<sup>1</sup>

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<sup>1</sup> The Board approved an extension to the due date for the final monitoring report from February 2013 to May 2013.

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*Enbridge 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 each action.....*

- 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.*

This report will summarize the monitoring programs conducted in support of the project and identify the success of mitigation measures and any potential cumulative effects as a result of the project. Specifically, this report has been compiled to address the requirements identified in Section 6.2.2 *Monitoring Reports* of the *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (Ontario Energy Board, 2011) whenever possible.

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Project Description  
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## **2 PROJECT DESCRIPTION**

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Enbridge constructed a Nominal Pipe Size (“NPS”) 16 (16 inch diameter; 406 millimetre) steel pipeline to supply natural gas to the YEC LP. The pipeline originates from Enbridge’s Schomberg Gate Station located at 4955 Lloydtown-Aurora Road in Pottageville, Ontario. From the Gate Station the Route traveled east along Lloydtown-Aurora Road through the community of Pottageville, crossed Provincial Highway 400 to Jane Street. The route proceeded north on Jane Street until it reached Davis Drive. It then followed Davis Drive east to Dufferin Street where it traveled north until the termination point at the YEC LP located at 18781 Dufferin Street. The right-of-way (“ROW”) was within the existing road allowances and utilized both horizontal directional drilling (“HDD”) and conventional styles of pipeline trenching for installation. HDD was primarily utilized to avoid sensitive features (wetlands, watercourse), roads, etc. to reduce the overall surface disturbance limiting overall potential impacts from the project. Approximately half (54%) of the pipeline was drilled by HDD methods with the remainder installed by traditional trenching techniques.

Construction of the pipeline commenced in November, 2010, on the YEC LP property and within the road allowance in April 2011. Enbridge subsequently completed construction of the Project in the Township of King with the pipeline energized on November 13, 2011.

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Monitoring Programs  
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### **3 MONITORING PROGRAMS**

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#### **3.1 Environmental Inspection and Monitoring**

Full-time Enbridge inspectors were onsite during construction to confirm environmental commitments were adhered to, the appropriate protection measures were implemented and that industry best practices were used. Enbridge also contracted Stantec Consulting Ltd. (“Stantec”) to assist in establishing an environmental inspection and monitoring program ensuring that environmental terms and conditions, and other commitments identified in the EA were complied with during all phases of construction. Stantec mobilized qualified environmental inspectors to assist Enbridge in maintaining compliance with all approval documentation and industry best practices. The Stantec environmental inspector was present for full-time inspection during all key construction activities (watercourse crossings, hydrostatic test discharge, etc.). Follow-up monitoring was also conducted after reclamation was completed to report on the post-construction conditions of the ROW.

#### **3.2 Water Well Monitoring**

##### **3.2.1 Residential Notification**

As part of the public notification process, three (3) residents requested to participate in a well monitoring program. Stantec contacted these residents, and completed sampling on April 21, 2011. During the sampling, Stantec provided the residents with a notification letter dated April 21, 2011 (see Appendix B). The notification letter detailed the proposed pipeline installation, the potential risk of groundwater interference and the proposed groundwater monitoring program.

In late April 2011, Enbridge proactively expanded the well monitoring program along the pipeline route to the east of Weston Road, approximately 13.5 km of pipeline. Construction had not yet begun along this portion of the route, and well monitoring results would represent baseline conditions. On April 29, 2011, Stantec delivered notification letters to any resident with a potential private water well within 50 m of the centreline of the pipeline (see letter dated April 29, 2011; Appendix B). Any resident interested in participating in the program was included in the monitoring program. During the site visit on April 29, 2011, Stantec identified 41 residences located east of Weston Road that had wells potentially located within 50 m of the centreline of the pipeline. Of the 41 residences identified on April 29, 2011, 9 residents wished to be added to the well monitoring program.

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After the well monitoring program commenced, Enbridge contacted Stantec to request that five additional residential wells be included in the well monitoring program. Stantec contacted the additional residents and coordinated a site visit for sampling. In total, 17 well owners with wells found to be accessible for monitoring participated in the project's monitoring program.

**3.2.2 Scope and Methods of Water Well Monitoring**

Monitoring was completed with the owners' permission and included water quality sampling and, depending on well accessibility, static and pumping well water level monitoring. Well questionnaires were completed with the well owners either over the phone prior to sampling, or at the time of sampling. For dug wells, the water level monitoring program included a water level digital logger installation, where possible, which was completed by a licensed well contractor. Depending on access, continuous monitoring was conducted at dug wells; due to their shallow, uncased construction, as they were considered to be at a greater risk of potential interference from construction activities.

The water quality samples were collected from a raw water tap after cleaning and running the tap for approximately 10 minutes, and placed directly into laboratory supplied sample containers. The samples were submitted for laboratory analyses of general chemistry, turbidity, metals and bacteriological parameters. Individual analytical results were presented to each resident individually following each sampling event with the available water level data.

Dataloggers were to be removed after monitoring was completed; however, two of the dataloggers remain in the wells and were not retrievable. Enbridge is formalizing agreements to leave the dataloggers in place.

**3.2.3 Results*****Well Water Quality***

The well water quality results indicated that there were several exceedances of the Ministry of the Environment ("MOE") Ontario Drinking Water Standards ("ODWS"), Maximum Acceptable Concentration ("MAC") for health-related parameters both before construction (April and May, 2011) and confirmed after the installation of the pipeline was completed (November, 2011 June and September 2012). The following is a list of the MAC parameters that were exceeded by some of the wells the participating in the monitoring program:

- Nitrate (10 mg/L MAC)
- Total Coliforms (0 CFU/100 mL MAC)
- *Escherichia coli* (E. coli) (0 CFU/100 mL MAC)



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Nitrate is present in groundwater as a result of plant or animal decay, agricultural fertilizers and/or septic systems and exceeded concentrations at one location. The ODWS indicate that nitrate concentrations exceeding 10 mg/L may result in a negative impact on infant health as infants less than six months old have not yet developed the ability to properly digest nitrate. All other individuals drinking the water are unaffected.

Results indicated that Total Coliforms within 8 residential well samples and E. coli within one residential sample exceeded their respective ODWS MAC within the collected raw water samples. These parameters are considered a health-related risk under the ODWS. Total Coliforms can occur naturally in soil and decaying vegetation, but may also be associated with fecal contamination. Stantec immediately notified the residents of all results which exceeded ODWS MAC upon receipt and review of laboratory analyses results.

The following parameters were found to have exceeded the ODWS Aesthetic Objective ("AO"), Operational Guideline ("OG") or Medical Officer of Health Report Limit ("MOH") in at least some of the samples including:

- Chloride (250 mg/L AO)
- Iron (0.3 mg/L AO)
- Sodium (200 mg/L AO / 20 mg/L MOH)
- Total Dissolved Solids (500 mg/L AO)
- Hardness (80-100 mg/L OG)

None of the above AO, OG, or MOH parameters are considered a health-related risk under the ODWS. Chloride and sodium are both aesthetic parameters related to potentially salty tasting water at high concentrations. Elevated sodium concentrations above 20 mg/L may also be a concern for consumers on a sodium-restricted diet. Iron is a colour related aesthetic parameter and elevated concentrations are a concern due to potential staining of the water fixtures. Residents were notified of these potential concerns in their individual notification letters.

Follow-up post-construction monitoring completed in November 2011 revealed similar water quality results and parameter exceedances as the initial samples. Based on available monitoring data for wells included in the well monitoring program, no adverse impacts to private water well water quality were interpreted due to the installation of the pipeline.

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***Well Water Mitigation***

Of the seventeen wells that were monitored by Stantec, three were found to have been adversely impacted by the installation of the pipeline. Two were temporary impacts that resulted in the well returning to its normal operation with no further action required. In these cases, Enbridge provided a temporary water supply until the wells returned to normal operation. In the third case, a repair to the seal around the well casing was required. In this case, Enbridge provided the funds necessary to make the well repairs. For a summary of these three concerns recorded by Enbridge along with the results of the additional investigations outlined in Section 5.2.1 and the negotiated settlement, see Table E-1 in Appendix E.

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### 4 FINAL RECLAMATION

#### 4.1 2012 Reclamation Measures

Final reclamation of surface disturbances were recommended in spring, 2012 (as included in the *Interim Monitoring Report*) by Stantec (2012) to properly address any outstanding environmental issues that may result in an ongoing effect. Six areas were identified as requiring specific mitigation measures to limit any ongoing effects as a result of the project (see Table 4-1 for the resolution as well as the success of the reclamation measures).

In addition, any areas exhibiting moderate erosion or bare areas on slopes were recommended to be seeded with an appropriate seed mix and method (i.e., hydroseed) and augmented with the installation of appropriate erosion control matting/blankets/rip-rap, etc., to further limit potential for erosion and subsequent sedimentation down-gradient of the slopes. A review of the conditions of the pipeline route was conducted on May 6, 2013. The inspection did not reveal any additional environmental concerns that required supplemental reclamation or restoration.

**Table 4-1 Resolved Reclamation Issues in 2012**

Interim Monitoring Report Reclamation Recommendation Location	Resolution	Success
1. Steep slope on the west ditch of Jane St, immediately south of Davis Drive	Enbridge installed rip-rap within the ditch-line and placed a seeded mulch mix on the sides of the ditch to promote vegetation establishment.	The rip-rap was successful in stopping ongoing erosion on the bottom of the ditch-line and vegetation became well established on the sides of the ditch. Area appears to be well stabilized and should not continue to actively erode. (Photo 1; Appendix C)
2. Drainage ditches into Watercourse ("WC")6	Drainage ditches leading into WC6 hydro-seeded and/or supplemented with a seeded mulch blend to promote adequate vegetation establishment.	Vegetation in the drainage ditch has not fully re-established itself; however, there was no evidence of active erosion. The drainage ditch should continue to re-seed itself with the rich seed-bank in the adjacent field. (Photos 2 and 3; Appendix C)
3. Steep slope on west side of Dufferin Street at the open-cut area, directly north of Davis Drive	The site was re-seeded using a hydro-seed mixture to stabilize the slope in spring 2012.	The slope has moderate vegetation establishment with limited indications of erosion at the site. The site should continue to re-seed itself and establish an appropriate level of vegetation to prohibit any active erosion. (Photo 4; Appendix C)

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**Table 4-1 Resolved Reclamation Issues in 2012**

<b>Interim Monitoring Report Reclamation Recommendation Location</b>	<b>Resolution</b>	<b>Success</b>
4. Sloughing/soil creep on small area of exposed backslope south of Miller's Side Road on Dufferin Street should be investigated and seeded as appropriate.	The area was stabilized using an erosion control blanket and re-seeded in 2012.	Vegetation establishment was good and appropriate for the conditions with no active erosion occurring. (Photo 5; Appendix C)
5. East side of Dufferin Street directly north of Miller's Side Road	Rip-rap was installed in the drainage ditch to reduce erosion potential and the sides of the ditches were hydro-seeded to promote the appropriate vegetation establishment.	The ditch has been stabilized as appropriate to reduce the potential for erosion and any potential supplemental deposition of sediment downslope into the adjacent Provincially Significant Wetland. (Photo 6; Appendix C)
6. Stantec recommends that all previously disturbed areas be appropriately vegetated and meet pre-construction conditions.	Hydroseed with appropriate vegetation seed mix to promote establishment on slopes.	Generally the site is well vegetated and stabilized to limit erosion on previously disturbed sites. (Photo 6; Appendix C)

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## **5 CONSTRUCTION EFFECTS AND MITIGATION MEASURES**

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### **5.1 Mitigation Measures**

Construction activities were carried out with a high level of respect for the environment and the residents located adjacent the ROW with appropriate mitigation measures implemented during all phases of the Project to minimize the potential effects of installing the pipeline. Good communication practices during construction related meetings was key between Enbridge staff, the Contractor, Environmental Inspector(s), landowners and agencies, and/or their representatives, to ensure full understanding of responsibilities to reduce the potential for overall significant adverse environmental effects.

Many of the potential significant environmental effects for the pipeline were avoided during routing by locating the pipeline within previously disturbed road rights-of-ways. Other potential adverse environmental effects of constructing were further reduced by implementing specific construction methodologies and timing construction at certain segments of the pipeline and proactively reclaiming disturbed areas as soon as possible under the appropriate conditions. Once installation was completed, each site was immediately re-graded, had sediment and/or erosion control measures implemented as needed and seeded with hydro-seed or an application of mulch to appropriately stabilize the slope. Reclamation was on-going, progressive and generally effective which limited the effects from the project upon the environment. No additional mitigation measures to those outlined in the EA were required during the installation of the pipeline and follow-up restoration. The mitigation measures were successful when applied appropriately in managing potential environmental effects as a direct result of the project to the extent possible.

Potential environmental impacts to wetlands and watercourses (fisheries resources) were reduced by isolating sensitive features along the route and proposing appropriate mitigation measures at provincially significant and unevaluated wetlands; and the nine (9) identified sensitive watercourses (WC1 to WC9) located along the ROW (Figure 1). Watercourses with sensitive fisheries issues were all crossed using a HDD installation method during the summer months outside of restricted activity periods ("RAP") whenever possible. By utilizing HDD as a crossing method for all watercourses, the potential for sedimentation in the watercourse, stream bed disturbance, impacts to normal streamflow, and generally uninterrupted fish passage was either minimized or maintained. The HDD method of installation as outlined in the EA was also effective in mitigating impacts at wetland crossings.

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Potential construction effects during HDD included siltation and sedimentation during a surface release of drilling mud, erosion of stream banks and disruption of downstream flow and migration patterns. Extensive mitigation measures were taken to minimize effects during HDD crossings by reducing the potential for sedimentation and contamination of the watercourse through a release of inadvertent returns of drilling mud within the bed and/or banks of the watercourse. The release of drilling mud along the banks of the watercourse was mitigated through thorough preparation and careful installation of protection measures prior to the onset of drilling while potential releases within the bed and banks of the watercourse were mitigated through release preparedness and having the appropriate spill response materials and other resources (vacuum trucks) readily available at all times during drilling.

**5.2 Public Inquiries and Concerns**

Enbridge provided residents and businesses along the route with a construction communication procedure prior to installation and made every reasonable effort to address concerns expressed by residents in an expeditious and courteous manner and maintain good landowner relations both during and post construction.

A total of forty-nine (49) comments were received by Enbridge from residents, businesses, and institutions both during and after construction including two in 2012 and three in 2013 which occurred since the *Interim Post Construction Environmental Monitoring Report* was filed with the OEB in May 2012. The two additional comments from 2012 were related to potential water well impacts which were subsequently addressed in 2012. Two of the additional comments in 2013 were related to potential water well impacts and are currently under investigation by Stantec; the remaining one relates to a damaged fence which will be repaired by the end of June, 2013.

All comments were immediately investigated and followed up with by an Enbridge representative or a third-party firm representing Enbridge. Currently, 51 of the public concerns having been addressed and three remain unresolved. For a log of detailed landowner concerns, follow-up actions/response and the status for each inquiry or concerns, see Appendix D.

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**5.2.1 Water Well Concerns**

In addition to the well monitoring program, eight additional property owners expressed concern to Enbridge that their wells may have been impacted by pipeline construction from July 2011 to April 23, 2013. Enbridge engaged Stantec to investigate each case. The most recent case (raised on April 23, 2013) is still under investigation. For the remaining seven, the investigations concluded:

- Enbridge was found to be at fault in three of the cases. The adverse impact in two of the cases was a temporary reduction in water quantity. The wells returned to their normal operation with no further action required other than Enbridge supplying a temporary potable water supply. In the third case, Enbridge provided funds to rehabilitate the outer well casing seal and return it to its pre-construction condition.
- In four cases, the evidence was inconclusive and it could not be proven that Enbridge did not have an impact. In all four cases, without prejudice, Enbridge reached out-of-court settlements with the property owners pursuant to which sufficient funds were provided to decommission the existing wells and install new wells.
- In one case, Enbridge was found not at fault. However, as a goodwill gesture, Enbridge provided sufficient funds to have the issue addressed.

Appendix E provides a summary of all of the well concerns and Enbridge's responses. All of these cases are also included in Appendix D - Resident Comments.

**5.3 By-Law Non-Compliance**

During the installation of the pipeline Enbridge only had one by-law non-compliance issue which was a result of being required to work on a Sunday during the pipeline drying/energization process which resulted in additional noise and construction crews working extra hours outside of the timing restrictions of the by-law. Enbridge reported the excessive noise to the Municipality (King); however, the Municipality did not receive any complaints and did not take any formal action against Enbridge. Prior to the drying process commenced, Enbridge delivered notices, alerting residents of the work and its timing.

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**5.4 Residual Effects**

The majority of the effects associated with the installation of the pipeline and interaction with the construction of other projects were predicted to have no cumulative significance. Any significant effects associated with the Project were minimized through route selection (utilizing existing corridors) and the appropriate implementation of site-specific effective mitigation measures. The majority of impacts associated with installation of the pipeline and interaction with the construction of other projects were managed appropriately based on the recommendations outlined in the EA. Vegetation removal, including loss of terrestrial habitat was considered to have no cumulative significance since no fragmentation of woodlots occurred and the pipeline was restricted to road allowances with vegetation progressively restored as soon as possible after the installation of the pipeline occurred.

Potential cumulative effects to aquatic fauna were expected to be negligible because all watercourse crossings were installed using HDD methods crossing a total of nine watercourses including tributaries to the Holland River. Surface waters were not expected to experience any disturbance due to the extensive mitigation procedures implemented to reduce to potential for inadvertent release and the subsequent effects it may cause. However, some of the watercourses received drilling mud releases during the HDD. Despite limited drilling mud released into watercourses, HDD crossings still likely overall reduced the potential for sedimentation into a watercourse as well as eliminated disturbances to the bank within the riparian zone and the streambed. Storm water management also was not present within any of the roadside drainage ditches; therefore, the biological communities in the watercourses were anticipated to be adjusted to periodic and short-term sedimentation. The drilling release would be similar to the sediment loading into the watercourse during a typical rain event.

Follow-up fisheries assessments were conducted at the watercourses with the greatest release and sensitivities which determined that effects were not likely to be significant and residual effects were not anticipated as a result of the drilling fluid releases. Impacts to the watercourses were considered to be short-term and as a result, the fish communities were anticipated to recover quickly with the benthic macroinvertebrate community returning to pre-release levels within one year.

Effects specific to the drilling mud release in WC5 (see Figure 1) where sensitive habitats (i.e., gravel riffles that may be used for spawning) were previously identified did not appear to be significant and are likely limited to behavioral impacts in fish, such as avoidance and benthic macroinvertebrate drift. The release of drilling mud in WC5 occurred over a period of approximately 20 minutes and within the appropriate in-water works timing window. Evidence of drilling mud deposits were not observed in the faster flowing habitats (i.e., runs and pools) and,



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as a result, impacts to these habitats are not anticipated. Furthermore, research has indicated that a minor accumulation of sediment in watercourses is typically removed during high flow events, such as storms or the spring freshet (Anderson et al. 1996; Reid and Anderson 1999). Therefore, the drilling mud deposits are likely to be removed during the proceeding storm event. As drilling mud deposits were not observed in potential spawning habitat (i.e., gravel riffles) during the assessments, these habitats were not likely to have been impacted by the drilling mud releases. Overall, Impacts to WC5 were considered to be short-term and, as a result, fish communities were anticipated to recover quickly with the benthic macroinvertebrate community returning to pre-release levels within a few months after the release.

All upland drilling mud releases that occurred were cleaned-up immediately after the release using a vacuum truck. Silt fence and straw-bales surrounding the releases (where necessary) were erected to limit migration with release locations proactively monitored during drilling for subsequent releases. Landowners were informed of all releases immediately and reclamation (if required) commenced as soon as practical after the completion of the drilling. In 2013, there was no noted evidence of upland releases along the ROW or within private property.

The only drilling mud release on private property that disrupted a business activity occurred on April 27, 2011, when drilling mud surfaced at the Esso service station at 4545 Lloydtown-Aurora Road. Enbridge took immediate action to report, contain and clean-up the spill using a vacuum truck. Subsequent investigation by Golder and Associates, in conjunction with the landowner's agents, revealed that the impact was not extensive or unsafe. An out of court settlement was proposed but details of the resolution are still being discussed.

As predicted in the EA, the addition of the pipeline to the existing road did not alter any land uses within the study area with impacts anticipated during construction not producing any significant adverse impacts.

Noise and dust disturbances were localized and were largely dissipated through mitigation. Once reclamation was completed in 2012, noise and dust was no longer to be an issue relating to the cumulative project. Vegetation removal, including loss of terrestrial habitat, is also considered to have no cumulative significance since no fragmentation of woodlots was a result of the Project.

Archaeological resources were not encountered during construction and the contingency plan (including notification of the Ministry of Culture) was not required to be contacted during the project. This confirms the prediction in the EA that no cumulative effects were anticipated since the pipeline follows existing linear disturbances for the majority of the route.

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A follow-up reclamation program occurred in May, 2012 to address any outstanding issues that were identified in the Interim Monitoring Report (Stantec, 2012). After one complete growing season, the pipeline ROW, isolated to road embankments and their existing easements has been restored close to pre-disturbance conditions or better. Vegetation establishment has been adequate along the pipeline and/or permanent erosion protection measures have been installed to further limit any future erosion potential.

**5.5 Summary**

Monitoring, contingency planning and appropriate environmental protection measures were important components to reduce the overall potential for residual and cumulative effects of the Project ensuring mitigation measures were effective in both the short and long term. During the installation of the pipeline, promptly addressing concerns raised by residents, as well as identifying potential impacts during the pre-construction consulting and developing appropriate effective mitigation strategies, limited the overall effects from the Project. In addition, knowledge gained throughout this construction specifically related to HDD mitigation preparation and strategies can be used to better identify, prevent and/or rectify effects from future releases.

Collectively, the cumulative effects from the Project were expected to be low in magnitude by 2013 with no significant cumulative effects predicted based upon the available data and conservative assumptions from the EA. By paralleling the existing road allowance and implementing the site-specific mitigation measures during construction no issues have been identified which would have resulted in a different outcome than those predicted in the EA. Monitoring, contingency planning and appropriate environmental protection measures were important components to reduce the overall potential for residual and cumulative effects of the Project ensuring mitigation measures were effective in both the short and long term. During the installation of the pipeline, promptly addressing concerns raised by residents, as well as identifying potential impacts during the pre-construction consulting, limited the overall effects from the Project. No significant residual or cumulative effects on environmental and/or socio-economic features were anticipated as a result of the Project. In summary, with the implementation of the proposed mitigation measures and enactment of appropriate contingency plans, the recommendations and predictions from the EA were consistent with what was experienced during construction.

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Closure  
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## **6 CLOSURE**

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This Report has been prepared by Stantec Consulting Ltd. for the sole benefit of Enbridge, and may not be used by any third party without the express written consent of Enbridge. Any use which a third party makes of this Report is the responsibility of such third party.

The data presented in this Report are in accordance with our understanding of the Project as it was presented at the time of our Report. In the event that changes or alterations are made to the Project, we reserve the right to review our data with respect to any such changes.

We trust this Report meets your current requirements. Please do not hesitate to contact us should you have additional questions about any facet of this Project. Please do not hesitate to contact the undersigned if you have any questions or require further information.

Respectfully Submitted,

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Monitoring Report**

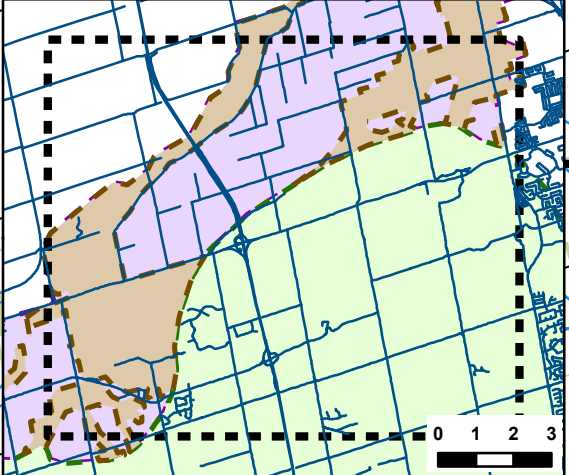
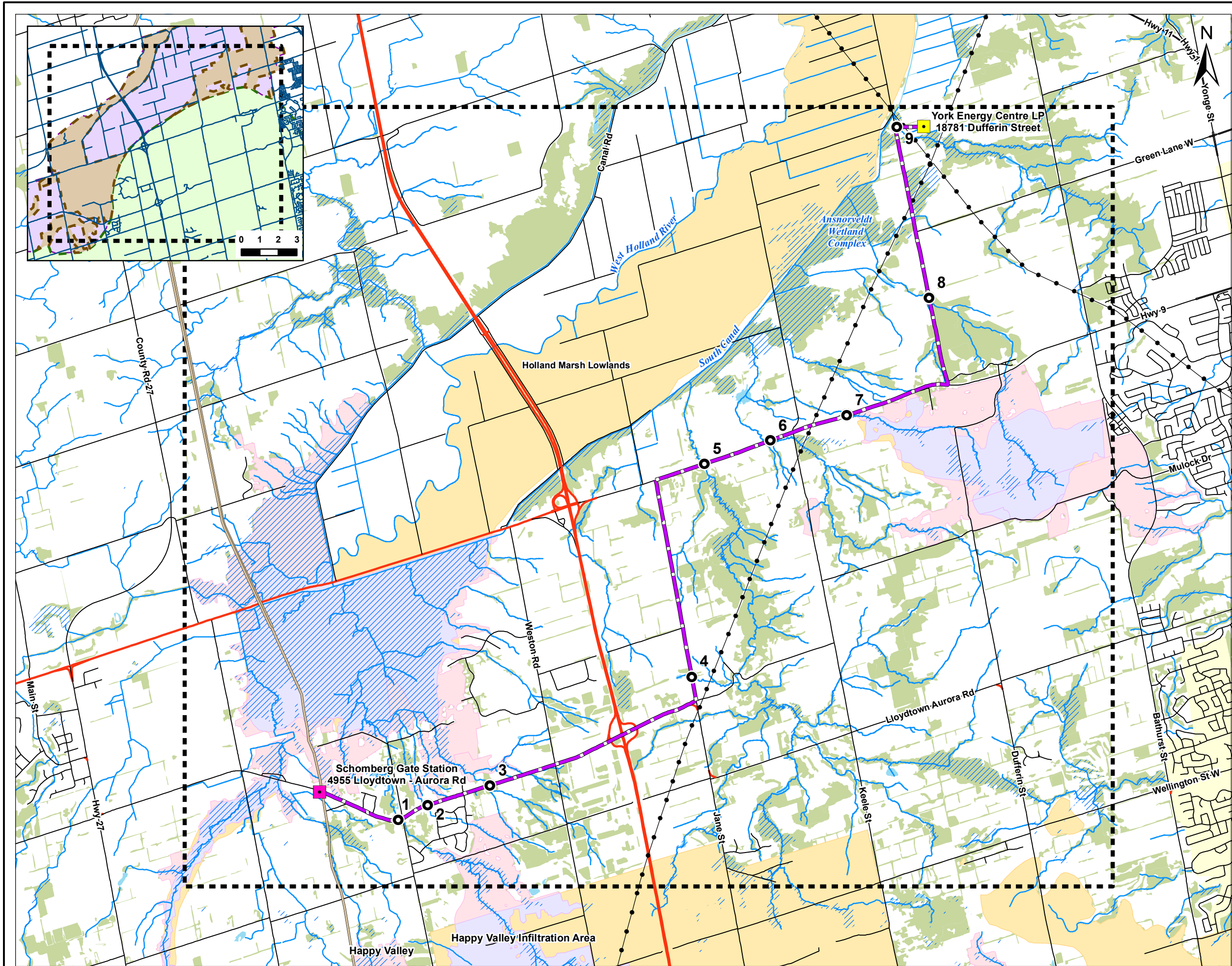
**Map of Site Location**

May 28, 2013

# **APPENDIX A**

**Map of Site Location**



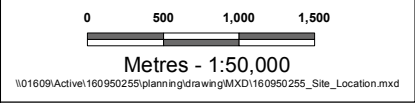


PIPELINE TO SERVE THE  
PRISTINE YORK ENERGY CENTRE

## Study Area Features

Produced by Jacques Whitford under Licence with the Ontario  
Ministry of Natural Resources © Queen's Printer for Ontario, 2004-2009

- HSF Watercourse Crossing
- Start Point
- End Point
- Preferred Route
- Road
- Highway
- Existing Pipeline
- Utility
- Watercourse
- Regional Study Area
- Unevaluated Wetland
- Environmentally Sensitive Area
- Area of Natural and Scientific Interest
- Environmentally Sensitive Area and Area of Natural and Scientific Interest
- Wetland
- Waterbody
- City/Town
- Greenbelt Area**
  - Oak Ridges Moraine
  - Greenbelt Countryside Area
  - Greenbelt Natural Heritage System



ON  
Area of Interest

PREPARED BY

FIGURE NO.

1

**Stantec**

**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

**Water Well Monitoring Residential Notifications and Questionnaire**  
May 28, 2013

# **APPENDIX B**

**Water Well Monitoring  
Residential  
Notifications and  
Questionnaire**



**Stantec Consulting Ltd.**  
49 Frederick Street  
Kitchener ON N2H 6M7  
Tel: (519) 579-4410

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**Stantec**

April 21, 2011  
File: 1609-50255/10

Dear Resident:

**Reference: Well Monitoring Program  
Pipeline to Serve the York Energy Centre in York Region**

Enbridge Gas Distribution (EGD) has begun work related to pipeline installation to service the York Energy Centre in York Region. The proposed construction includes a 16.7 km long 16 inch natural gas pipeline extending from EGD's Schomberg Gate Station to the York Energy Centre. The construction is scheduled to be completed in December 2011.

On behalf of EGD, Stantec Consulting Ltd. (Stantec) is conducting a groundwater / well monitoring program in support of the proposed construction. The program is being completed to establish groundwater conditions prior to and following EGD construction activity. If interested, residents may request to participate in the monitoring program, which includes water quantity sampling and water level monitoring. Participation is not mandatory.

As part of the monitoring program, Stantec will complete the following monitoring prior to and following the proposed EGD construction activity:

- Collect one water quality sample from a raw water tap and submit it for laboratory analyses for metals and general chemistry;
- Measure the water level within your residential well, if accessible, under static conditions and during operation of your residential pump; and
- Complete a well questionnaire detailing any available information regarding your private well.

Stantec is completing the baseline sampling in April 2011 prior to any significant construction activity on site. The post-construction sampling is tentatively scheduled for Spring 2012 but will be dependent on timing of the final construction.

If you have any questions or concerns regarding the residential sampling, please contact Lesley Veale from Stantec at (519) 585-7377 or e-mail at [lesley.veale@stantec.com](mailto:lesley.veale@stantec.com).

Should you have any questions or concerns regarding the EGD construction activity, please contact Barb Thompson at (905) 713-2442 or e-mail at [yecpipeline@enbridge.com](mailto:yecpipeline@enbridge.com).

Sincerely,

**STANTEC CONSULTING LTD.**

Lesley Veale, M.Sc., P.Geo.  
Hydrogeologist  
Tel: (519) 585-7377  
Fax: (519) 579-4239  
[lesley.veale@stantec.com](mailto:lesley.veale@stantec.com)





**Stantec Consulting Ltd.**  
49 Frederick Street  
Kitchener ON N2H 6M7  
Tel: (519) 579-4410

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**Stantec**

April 29, 2011  
File: 1609-50255/10

Dear Resident:

**Reference: Well Monitoring Program  
Pipeline to Serve the York Energy Centre in York Region**

Enbridge Gas Distribution (EGD) has begun work related to pipeline installation to service the York Energy Centre in York Region. The proposed construction includes a 16.7 km long 16 inch natural gas pipeline extending from EGD's Schomberg Gate Station to the York Energy Centre. The construction is scheduled to be completed in December 2011.

On behalf of EGD, Stantec Consulting Ltd. (Stantec) is conducting a groundwater / well monitoring program in support of the proposed construction. The program is being completed to establish groundwater conditions prior to and following EGD construction activity. If interested, residents may request to participate in the monitoring program, which includes water quantity sampling and water level monitoring. Participation is not mandatory and depending on the response, only select locations may be included in the program.

As part of the monitoring program, Stantec will complete the following monitoring prior to and following the proposed EGD construction activity:

- Collect one water quality sample from a raw water tap and submit it for laboratory analyses for metals and general chemistry;
- Measure the water level within your residential well, if accessible, under static conditions and during operation of your residential pump; and
- Complete a well questionnaire detailing any available information regarding your private well.

Stantec is completing the baseline sampling in April 2011 or early May 2011 prior to any significant construction activity on site. The post-construction sampling is tentatively scheduled for Spring 2012 but will be dependent on timing of the final construction.

If you have any questions or concerns regarding the residential sampling, please contact Lesley Veale from Stantec at (519) 585-7377 or e-mail at [lesley.veale@stantec.com](mailto:lesley.veale@stantec.com).

Should you have any questions or concerns regarding the EGD construction activity, please contact Barb Thompson at (905) 713-2442 or e-mail at [yecpipeline@enbridge.com](mailto:yecpipeline@enbridge.com).

Sincerely,

**STANTEC CONSULTING LTD.**

Lesley Veale, M.Sc., P.Geo.  
Hydrogeologist  
Tel: (519) 585-7377  
Fax: (519) 579-4239  
[lesley.veale@stantec.com](mailto:lesley.veale@stantec.com)



## ERFF2.13 - PRIVATE WATER WELL INVENTORY FORM

Stantec Project Reference: \_\_\_\_\_

### (1) General Information

Owner's Name: \_\_\_\_\_

Tenant's Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

911 Address of well: \_\_\_\_\_

Township, Con #, Lot #: \_\_\_\_\_

Telephone #: \_\_\_\_\_

Date of Inventory: \_\_\_\_\_

### (2) Water Well Information

a) Do you have a private water well? ☐ Yes ☐ No

b) Are you connected to the municipal water supply system? ☐ Yes ☐ No

c) Do you use your private water well? ☐ Yes ☐ No

For what uses? ☐ Drinking ☐ Washing ☐ Lawn ☐ Other \_\_\_\_\_

d) Do you use any other sources of water? ☐ Yes ☐ No

Alternative Sources (cistern, bottled): \_\_\_\_\_

e) Do you have a copy of the driller's log for the well? ☐ Yes ☐ No

*If so, please forward a copy of the well log along with this inventory form.*

f) If you are unable to provide us a copy of the well log, please provide as much of the following information as you can.

This information may help us to locate your well record. If we are able to locate your well record, we will mail you a copy.

Original Well Owner: \_\_\_\_\_

Date Constructed: \_\_\_\_\_

Driller: \_\_\_\_\_

Well Type (drilled, dug/bored): \_\_\_\_\_

Casing Inside Diameter: \_\_\_\_\_

Depth (below ground surface): \_\_\_\_\_

Pump Type/Setting (bgs): \_\_\_\_\_

Ground Surface Elevation: \_\_\_\_\_

Water Level (below ground surface): \_\_\_\_\_

g) Please circle the terms that best describe the accessibility of your well:

buried in a pit or concrete chamber

casing sticks above the ground

other (please describe): \_\_\_\_\_

h) If the well is in a pit or concrete chamber, please circle the type of lid:

single circular concrete slab

two semi-circular concrete slabs

square lid within a larger circular concrete slab

other (please describe): \_\_\_\_\_

i) Has the well ever gone dry? ☐ Yes ☐ No

j) What is the quality of the water? ☐ Poor ☐ Good ☐ Excellent

Comments (color, odor, taste, etc.) \_\_\_\_\_

k) Would you be interested in having the water level measured in your well? ☐ Yes ☐ No

### (3) Water Well Treatment

(a) Do you treat your well water? ☐ Yes ☐ No

(b) If you answered yes, what method of treatment do you use? \_\_\_\_\_



## ERFF2.13 - PRIVATE WATER WELL INVENTORY FORM

Stantec Project Reference: \_\_\_\_\_

### (4) Septic System Information

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| a) Do you have a private septic system?                        | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b) Are you connected to the municipal sewer system?            | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c) Have you ever experienced problems with your septic system? | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Please provide us with a sketch showing the location of your well and septic system relative to the road, house and other structures on your property. Please include a north arrow.

Please provide any other comments:

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Thank you for taking the time to complete this inventory. The personal information requested on this form will be used for follow-up contact and property identification purposes and will not be included in published reports. If you have any questions regarding any aspect of this project, please call \_\_\_\_\_ or \_\_\_\_\_ at Stantec Consulting (519-579-4410).

Please forward completed forms in the attached envelope to:

\_\_\_\_\_  
 Stantec Consulting Ltd.  
 49 Frederick Street  
 Kitchener, Ontario  
 N2H 6M7

**Stantec**

**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

**Photo Log**

May 28, 2013

# **APPENDIX C**

**Photo Log**

**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report**

Photo Log  
May 28, 2013



**Photo 1**      **Steep Drainage Channel Stabilized with Rip-Rap on West Ditch of Jane St, Approaching Davis Drive (May 6, 2013)**



**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report**

Photo Log  
May 28, 2013



**Photo 2      Drainage Ditches Leading into WC6 Remains without Full Vegetation Re-establishment (May 6, 2013)**



**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

Photo Log  
May 28, 2013



**Photo 3      Standing Water in Drainage Ditch Leading into WC6 (May 6, 2013)**



**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

Photo Log  
May 28, 2013



**Photo 4      Vegetation Establishment on the Steep Slope on the West Side of Dufferin Street at  
the Open-Cut Area, Directly North of Davis Drive (May 6, 2013)**



**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

Photo Log  
May 28, 2013



**Photo 5      Slope Stability of a Former Sloughing/Soil Creep Area South of Miller's Side Road  
on Dufferin Street (May 6, 2013)**



**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

Photo Log  
May 28, 2013



**Photo 6      Rip-Rap Installed within the Drainage Ditch in 2012 on the East side of Dufferin  
Street, Directly North of Miller's Side Road (May 6, 2013)**

**Stantec**

**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

Resident Comments  
May 28, 2013

# **APPENDIX D**

**Resident Comments**

# Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments  
May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
1	24-Mar-11	Got construction notice letter. Why not going up 8th Conc. and avoid Pottageville?	Enbridge Representative explained enviro-socio-econ assessment and the Board process.	Complete	Closed
2	6-Apr-11	a) Blind spot when coming out of driveway. b) Flag lady was verbally abusive. c) Appears to be cutting into her bank. She would like it restored when work moves on.	a) The Contractor placed convex mirror across from her driveway. b) Written warning was issued by the Contractor. c) Impact is in ROW. The Contractor to ensure that bank will be put back to original condition.	a) Complete b) Complete c) Complete	Closed
3	9-Apr-11	Concerns about well and basement.	Enbridge Representative engaged Stantec to investigate. No damage to basement. Stantec assessment of well inconclusive. Out of court settlement reached.	Complete	Closed
4	15-Apr-11	The Contractor is pleasant with lots of trucks, but traffic control is good. Concerned about dust from road blowing onto property.	Enbridge Representative told resident that we have a sweeper that will clean the road.	Complete	Closed
5	17-Apr-11	Former Councilor requested natural gas service to home.	Enbridge Sales Representative responded to inquiry.	Complete	Closed
6	18-Apr-11	Vacuum truck has been parked and idling for about an hour next to property. Concerned about noise, emissions and wasted fuel.	Enbridge Representative requested driver to shut off or relocate vehicle. Driver shut down.	Complete	Closed
7	22-Apr-11	Councilor called with questions about pipeline stress.	Enbridge Representative responded to questions.	Complete	Closed

## Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments  
May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
8	22-Apr-11	a) Does not feel that snow fence around excavation at edge of road is adequate, b) Concerned that flaggers are leaving empty water bottles behind, c) Vacuum trucks are noisy, d) Vac hole / excavation too close too deep (8') and too close to road.	a) Snow fence meets requirements, however the Contractor has installed additional quick fence. b) Flaggers say ditches are full of trash - bottles not associated with the Contractor. Topic was address at the next tailgate meeting that laborers will clean ditches where they have been working. c) Enbridge Representative apologized for noise but explained not much can be done except avoidance. d) The Contractor reports road not at risk and not 8' deep.	a) Complete b) Complete c) Complete d) Complete	Closed
9	25-Apr-11	Inquired about getting a gas hook-up to their house.	Enbridge Sales Representative to return call.	Complete	Closed
10	27-Apr-11	Inquired about getting a gas hook-up to their house.	Enbridge Sales Representative to return call.	Complete	Closed
11	7-May-11	Resident says that they did not know anything about the work being done on Jane Street, and it is affecting business.	Enbridge Representative provided a copy of the Enbridge claims form.	Complete	Closed
12	9-May-11	Would like the pipe etc. moved from in front of his business.	Enbridge Representative spoke to Contractor about materials to be removed by end of day (May 9, 2011).	Complete	Closed
13	11-May-11	Inquired about getting a gas hook-up to their house.	Enbridge Sales Representative to return call.	Complete	Closed
14	11-May-11	Inquired about getting a gas hook-up to the Kettleby School.	Enbridge Sales Representative to return call.	Complete	Closed

**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report**

Resident Comments

May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
15	13-May-11	Concerned about the potential impact to resident's well.	Enbridge representative returned call and told her he had contacted Stantec to come to take samples. Arrangements were made to install a potable water supply. Stantec assessment was determined to be inconclusive. An out of court settlement reached.	Complete	Closed
16	19-May-11	Inquiring about which side of the road the pipeline is going to be on near home.	Enbridge Representative stated that the pipeline is going on the other side of the road from the property.	Complete	Closed
17	19-May-11	A resident requested the MSDS for Bentonite.	The Contractor provided the MSDS to the resident.	Complete	Closed
18	20-May-11	Inquired about a puddle beside house since pipeline was installed. Landowner drains sump into the ditch and it runs away but since the pipe went in it just sits there.	Stantec went to the address and found a bit of gravel left over from a drill pad. He removed the gravel from the ditch and restored the water flow.	Complete	Closed
19	1-Jun-11	Concerned about the letter the Contractor dropped off regarding the changes to the turning lanes on Davis Drive. Requested to be contacted and explain what is happening.	The Contractor called the resident and explained the traffic control plan.	Complete	Closed
20	1-Jun-11	Someone came by a month ago about doing well monitoring on his well. They have not heard anything back.	Enbridge Representative called and left a message letting them know that the well monitoring would be on-going until after construction was completed (in about 4 weeks). Also stated that once construction had been completed, final samples would be taken and it would take about a month for the final results to come back.	Complete	Closed
21	8-Jun-11	Would like the restoration completed in front of house.	The Contractor completed the restoration.	Complete	Closed
22	8-Jun-11	Inquired about getting a gas hook-up to their house.	Enbridge Sales Representative to return call.	Complete	Closed



## Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments

May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
23	10-Jun-11	There is watering coming out beside the casing of the resident's well.	Stantec investigated. Appears well casing was not well sealed and drilling mud is rising up along the casing. Well water unaffected. Out of court settlement reached.	Complete	Closed
24	5-Jul-11	York Region received a concern regarding the restoration of the ditch in front of resident's property.	Enbridge Representative spoke to resident and agreed to monitor the situation and see what happens with the drainage after a heavy rain. No further concerns.	Complete	Closed
25	8-Jul-11	Resident wrote a letter to Enbridge regarding concerns with a HDD release which occurred on property on Friday, July 8, 2011.	Enbridge Representative responded to questions.	Complete	Closed
26	8-Jul-11	Resident concerned with tree on property which hangs over mailbox. Wanted to ensure it was not going to be disturbed.	Contractor committed to protect the tree. Construction completed without damage to tree.	Complete	Closed
27	15-Jul-11	Concern that pipeline construction impacted water level in well.	Investigation by Stantec concluded that dewatering of a nearby excavation caused a temporary localized water table drop resulting in a drop of well water levels. A temporary water supply was provided until well returned to normal operation.	Complete	Closed
28	15-Jul-11	Concern that pipeline construction impacted water level in well.	Investigation by Stantec concluded that dewatering of a nearby excavation caused a temporary localized water table drop resulting in a drop of well water levels. A temporary water supply was provided until well returned to normal operation.	Complete	Closed
29	15-Jul-11	Concern raised about potential construction related impact on well.	Site meeting was arranged; observations and samples taken. Results of the investigations and assessments remained inconclusive. Without prejudice, settlement negotiated and payment executed and received in February, 2013.	Complete	Closed

# Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments  
May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
30	15-Jul-11	The resident called to say Bell line is broken.	Contractor has not had any activity at this location within the past few weeks. Bell was aware of the issue and repair crews were dispatched.	Complete	Closed
31	18-Jul-11	Resident complained about the dust on the road.	Contractor committed to keep the road watered down to control the dust.	Complete	Closed
32	25-Jul-11	Inquired about how crews were going to be in front of horse paddock.	Enbridge Representative stated that Contractor would be finished by Wednesday, July 27, 2011 except for final restorations.	Complete	Closed
33	25-Jul-11	Wanted to know what Enbridge could do about the noise from the drill and reclaimed.	Contractor installed plywood walls to deflect the noise up and outward. No further complaints received.	Complete	Closed
34	26-Jul-11	Inquired about update on well monitoring. Well is 240' deep (cased) and Stantec performed water quality tests months ago. This well will be added to the ongoing well monitoring program.	Stantec will follow up with resident at a later date once construction in the area is complete. Well monitoring program has since been completed.	Complete	Closed
35	4-Aug-11	Resident complained that the Contractor was working on their property.	Contractor staked-out the property so that issue does not happen again. No further complaints received.	Complete	Closed
36	9-Aug-11	Contractor needs to install a swale in the ditch. Resident also seeking compensation for damage/removal of (unmaintained) fence.	Contractor does not agree that they impacted the fence. Contractor delivered a load of crushed limestone as compensation.	Complete	Closed
37	10-Aug-11	Canada Post will not deliver mail due to how the Contractor reinstalled mailbox. Also had some concerns regarding trees and clean up indicated that resident is a renter and not the owner of the property.	Contractor completed work at that location and was no longer an issue.	Complete	Closed



## Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments

May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
38	16-Aug-11	Resident is having issues with grass that is not germinating and the weeds that are growing on their front lawn. This resident would also like to know the results of the well monitoring.	Several attempts were made to seed the lawn and it was eventually sodded.	Complete	Closed
39	18-Aug-11	Resident phoned complaining about the excessive dust on Dufferin Street.	Enbridge requested Contractor to water Dufferin Street and keep the dust to a minimum.	Complete	Closed
40	18-Aug-11	Resident has concerns about traffic control, non-local, pot holes, dust, damage to his fence and trees. Wants compensation for the four hours of work lost due to the Bell line being down.	Enbridge called and left a message that was not returned.	Complete	Closed
41	13-Sep-11	Resident would like their property restored, the ditch is too steep and they do not have grass yet.	Pre-construction photos show the restoration was to original condition. No additional restoration required.	Complete	Closed
42	21-Sep-11	Resident stated that they just got a water sample back from York Region and it shows coliform levels at around 25. Claims these are the highest they have been in 13 years.	Stantec investigated and found an issue with the aboveground seal on the well (not related to pipeline construction). Enbridge paid to have well repaired.	Complete	Closed
43	22-Sep-11	Resident stated they have been experiencing well water issues since the beginning of September, 2011. Claimed they had to change his filters very frequently in the past few weeks.	Stantec assessed the well and agreed there could have been a temporary disturbance. They also noted pre-existing issues with the well. Enbridge paid for the repairs to the well.	Complete	Closed
44	26-Sep-11	Resident wanted to know when the west side of her property would be restored to pre-construction appearance.	Property was restored that week.	Complete	Closed
45	28-Sep-11	Resident wanted front lawn repaired, fence put back up and the ditch repaired where it has washed out	Contractor completed the requested repairs.	Complete	Closed

## Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments

May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
46	4-Oct-11	Resident called regarding the restoration of the property. Stated satisfaction with the left side of the driveway; however, wants to know what is going on with the right side.	Enbridge Representative stated that a valve would be installed on the right side of his driveway and then it will be reinstated. The resident has not called back in since the valve and associated reinstatement was completed.	Complete	Closed
47	31-Oct-11	Complaint about the noise coming from the construction of the pipeline.	Enbridge Representative explained that it's the drying of the pipeline, the noise is coming from the air being passing through and it should be finished drying by Wednesday or Thursday of that week.	Complete	Closed
48	4-Apr-12	Emailed alleging fence had been damaged by flooding associated with pipeline construction last fall.	Stantec investigated and determined there was no other evidence of flooding and that the fence damage is localized at a spot containing car debris (broken glass, mirror, reflector, etc.) suggesting a car accident damaged the fence. Despite the evidence, resident insists flooding damaged the fence. Without prejudice, settlement negotiated; payment made and received in August, 2012.	Complete	Closed
49	30-Apr-12	Appears to be subsidence over pipeline necessitating re-grading and lawn restoration.	Enbridge Representative returned call and explained that additional restoration was planned once the ground conditions were dry. The issue would be logged and addressed before June, 2012.	Complete	Closed
50	7-May-12	Subsidence over pipeline necessitating regrading of ditch and possible lawn restoration.	Enbridge Representative returned call and explained that additional restoration was planned once the ground conditions were dry. The issue would be logged and addressed before June, 2012.	Completed	Closed

# Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Resident Comments  
May 28, 2013

**Table D-1 Summary of Resident Comments and Resolutions**

Comment Number	Date	Resident Comment	Resolution	Status	State
51	7-Sep-12	Concern raised about potential construction related impact on well.	Stantec investigated and found the evidence to be inconclusive. Enbridge and the landowner agreed to monitor the situation; if no improvement, remedial action will be planned.	Results on investigations and assessments remained inconclusive. Without prejudice, settlement negotiated; payment made and received in February, 2013	Closed
52	15-Mar-13	Concern about a "rotten egg" smell in the well water.	Stantec investigated. One possible explanation is that vibrations from a nearby large HDD rig caused rust and scale on the inside well casing to come loose and sink to the well screen where it was subject to microbial action resulting in sulphur production (and a rotten egg smell). Without prejudice, Enbridge engaged a well contractor under the supervision of Stantec to pump out the well and remove the sediment.	As of late-May, 2013, the property owner has confirmed that the issue is resolved to their satisfaction.	Closed
53	27-Mar-13	Approximately 150 feet of page wire fence along north property line (abuts Lloydtown Rd) was removed during pipeline construction and not replaced.	Enbridge to obtain quotes for repair of the fence. Repairs are expected to be completed when the ground is drier.	Enbridge has engaged a fencing contractor to make repairs which are scheduled to be complete in June 2013.	Open
54	23-Apr-13	Concern about "natural gas smell" in well water.	Enbridge immediately dispatched a crew to determine if there was a gas leak from the pipeline which was determined to be negative. Stantec is currently assessing well water quality	Under investigation	Open

**Stantec**

**Pipeline to Serve York Energy Centre LP Final Post Construction Environmental  
Monitoring Report**

Summary of Well Related Concerns  
May 28, 2013

# **APPENDIX E**

**Summary of Well  
Related Concerns**

## Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Summary of Well Related Concerns  
May 28, 2013

**Table E-1 Water Well Concerns Summary**

No.	Date	Concern	Results of Investigation	Settlement
1	9-Apr-11	Turbidity, water quality and water level issues with well.	Despite evidence of a pre-existing condition, the evidence was inconclusive. As Enbridge could not definitively prove no impact resulted from pipeline construction, an out-of-court settlement was reached.	Without prejudice, Enbridge provided sufficient funds to decommission existing well and install a new well.
2	13-May-11	Turbidity, water quality and water level issues with well.	Despite evidence of a pre-existing condition, the evidence was inconclusive. As Enbridge could not definitively prove no impact resulted from pipeline construction, an out-of-court settlement was reached.	Without prejudice, Enbridge provided sufficient funds to decommission existing well and install a new well.
3	10-Jun-11	Drilling mud surfacing around well casing at grade.	Drilling mud found a fissure in the external seal around the well casing a migrated to the surface. It is not likely that the drilling mud caused the fissure (i.e., it was pre-existing), however the there was no question that migration of drilling mud exacerbated the condition.	Enbridge provided sufficient funds to repair the well seal.
4	15-Jul-11	Turbidity in well water.	Despite evidence of a pre-existing condition, the evidence was inconclusive. As Enbridge could not definitively prove no impact resulted from pipeline construction, an out-of-court settlement was reached.	Without prejudice, Enbridge provided sufficient funds to decommission existing well and install a new well.
5	15-Jul-11	Pipeline construction impacted water level in well.	Investigation by Stantec concluded that dewatering of a nearby excavation caused a temporary decrease in the water table level resulting in decrease in quantity of well water.	Temporary water supply provided until well returned to normal operation.

# Pipeline to Serve York Energy Centre LP Final Post Construction Environmental Monitoring Report

Summary of Well Related Concerns  
May 28, 2013

**Table E-1 Water Well Concerns Summary**

No.	Date	Concern	Results of Investigation	Settlement
6	15-Jul-11	Pipeline construction impacted water level in well.	Excavation and dewatering caused temporary localized water table drop resulting in drop in well water.	Temporary water supply provided until well returned to normal operation.
7	21-Sep-11	Coliforms in well water.	Improper seal on top of well casing allowing water and other materials to enter the well - not related to construction of pipeline.	Without prejudice, Enbridge engaged a well contractor under the supervision of Stantec to repair the well casing seal.
8	22-Sep-11	Turbidity in well water.	Temporary condition that cleared up on its own.	None required.
9	7-Sep-12	Water level issues.	Inconclusive. As Enbridge could not definitively prove no impact resulted from pipeline construction, an out-of-court settlement was reached.	Without prejudice, Enbridge provided sufficient funds to decommission existing well and install a new well.
10	15-Mar-13	"Rotten egg" smell in well water.	Vibrations from a nearby large HDD rig may have caused rust and scale on the inside well casing to come loose and sink to the well screen where it was subject to microbial action resulting in sulphur production (and a rotten egg smell).	Without prejudice, Enbridge engaged a well contractor under the supervision of Stantec to pump out the well and remove the sediment.
11	23-Apr-13	"Natural Gas" smell in well water.	In progress.	To be determined