# ENBRIDGE GAS DISTRIBUTION INC.
# POST-CONSTRUCTION
# ENVIRONMENTAL MONITORING REPORT NO.1

## VECTOR TIE-IN PIPELINE
## TECUMSEH STORAGE ENHANCEMENT PROJECT
## EB-2007-0888/EB-2007-0889/EB-2007-0890

Prepared by
Enbridge Gas Distribution Inc.
September 14, 2009

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## Appendices

## 1.0 Introduction

In the spring of 2008 the Ontario Energy Board ("OEB") under docket number EB-2008-0888/EB-2008-0889/EB-2008-0890 granted Enbridge Gas Distribution Inc. ("Enbridge") Leave to Construct and operate an NPS 16 (16 inch diameter) pipeline to deliver natural gas to and take away gas from the Vector Pipeline Limited Partnership pipeline. The pipeline is part of the Tecumseh Storage Enhancement Project required to meet the demand for high deliverability storage services in Ontario. Prior to obtaining approval, Enbridge conducted an environmental evaluation of the selected route with the use of an Environmental Screening completed by an Enbridge Environmental Specialist. The purpose of the Environmental Screening was to identify potential impacts resulting from construction, and prepare mitigative measures to minimize environmental and socio-economic impacts. An Environmental Screening was completed in lieu of an Environmental Assessment due to the short length of the proposed pipeline.

| **Report Title** | **Conducted by**: | **Date** |
|---|---|---|
| Enbridge Gas Distribution Inc. Proposed Vector Tie-In at Sombra Compressor Station Environmental Screening Report | Enbridge Gas Distribution Inc. | May 2007 |

Construction of this pipeline began on April 28, 2008 and was completed on May 29, 2008. The pipeline was commissioned on July 15, 2008.

This report has been prepared in accordance with OEB EB-2008-0888/EB-2008-0889/EB-2008-0890 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. 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.

3.2 The interim monitoring report shall confirm Enbridge 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 the mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and any recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

This report is limited to items that have been identified prior to August 2009. Items addressed after this date will be identified in the final Post-Construction Environmental Monitoring Report. This report will summarize actual construction procedures and identify any significant deviations from proposed construction activities.

## 2.0 Project Description

The Vector Tie-In pipeline was constructed to deliver natural gas to and take away gas from the Vector Pipeline Limited Partnership pipeline. The pipeline is required to meet the demand for high deliverability storage services in Ontario. The pipeline is approximately 800 meters (m) in length and is located entirely within Concession 13 Lots 22 and 23 of St. Clair Township (geographic township of Sombra) in Lambton County. The pipeline is tied into the Enbridge Sombra Compressor Station and terminates at the NPS 42 Vector pipeline. Appendix A shows the constructed pipeline within a regional context.

## 3.0 Environmental Inspection

In order to ensure that environmental commitments were honoured and that the best industry practices were used, a full time inspector was onsite. In general, the duties of the inspector included the following items:

- provide advice to the Project Manager, Construction Inspector, and all construction personnel regarding compliance with environmental legislation, regulations and industry standards;
- provide advice regarding adherence to environmental specifications and commitments made in the previously mentioned documents and to regulatory agencies, including the OEB;

- act as a liaison with environmental regulators, government agencies and interest groups;
- provide immediate advice regarding spill prevention and contingency; and,
- ensure appropriate waste disposal of any hazardous construction wastes.

## 4.0 Construction Effects and Mitigation Measures

Construction effects and mitigation measures which were implemented to minimize the potential effects the construction of the Vector Tie-in pipeline are summarized in Table 1. All activities were conducted in adherence to the contract documentation between Enbridge and the contractor as well as the Enbridge Construction Policies and Procedures.

**Table 1.**

**Construction Effects and Mitigation Measures**

| Activity | Duration | Potential Effect | Mitigation Measures |
|---|---|---|---|
| Vegetation Cover | Throughout Construction (April 2008– May 2008) | Permanent removal of vegetation. Aesthetic degradation. Changes in surface drainage patterns affecting amount of water available. Changes to sunlight or wind exposure regimes. | Limits of work area marked to minimize encroachment into vegetated areas. Majority of construction completed within agricultural field. |
| Topsoil Handling | Throughout Construction | Disruption of surface and subsurface soils. Soil mixing may result in loss of productivity. | Contractor stripped topsoil and stockpiled separately from subsoil. Mixing of soils was minimized. Segregated topsoil was replaced on surface following construction. Topsoil was tilled prior to cultivation. |
| Noise | Throughout Construction | Disturbances to sensitive receptors (i.e. residents, seniors' homes, schools). | Construction equipment conformed to guidelines for sound and emission levels. |
| Climate | Throughout Construction | Heavy rainfall may result in flooding of adjacent lands, erosion and compaction and rutting (if construction persists). High winds may erode loose soil material, including topsoil and create nuisance dust. | During wet soil conditions construction on agricultural lands were suspended. Work resumed only upon approval by Chief Inspector. Nuisance dust was controlled by applying water to work area (if required). |

## Table 1.

## Construction Effects and Mitigation Measures

| Activity | Duration | Potential Effect | Mitigation Measures |
|---|---|---|---|
| Archaeological Monitoring | Throughout Construction | Disturbance and potential destruction of archaeological artifacts. | Construction within previously excavated areas (i.e. agricultural field) will minimize potential for encountering archaeological artifacts. |
| Tile Drainage | Throughout Construction | Damage to tile drainage system. May result in flooding of agricultural areas. | In accordance with Enbridge Policies and Procedures, repair and/or replace all damaged tile drainage infrastructure. |
| Trenching and Excavation | Throughout Construction | Open trenches present a hazard to vehicular and pedestrian traffic. Restricts access | Protective barricades (i.e., snow fence, concrete barriers) were erected around trenches and excavations during construction activities. |
| Utility Crossings | Throughout Construction | Minimum distance separation from buried or above-ground services may not provide sufficient room for the installation of a gas pipeline; damage to utilities may inconvenience landowners | In accordance with the Enbridge Policies and Procedures, locates were obtained prior to any excavation work. Warning signs posted in vicinity of overhead power lines |
| Spills | Throughout Construction | Contamination of air, soil, surface water or ground water. Inconvenience to landowners and public | As required, contractor had spill containment kits at the project site. |
| Hydrostatic Testing | May 2008 | Disruption of water supply to landowners or emergency services. Uncontrolled discharge of water could cause erosion, sedimentation and contamination of surface water supplies. | Water for hydrostatic testing was obtained from the Local Municipal Water Tower. No significant adverse environmental effects resulted from the hydrostatic testing and dewatering procedures. |
| Pipe Energizing | July 2008 | Inconvenience and/or negative health effects to nearby landowners and the public. | Energizing was completed in accordance with Enbridge Policies and Procedures. |
| Clean-Up | Throughout Construction | Restores the pipeline easement to pre-construction conditions. | Clean up activities were conducted in accordance with the Enbridge Construction Manual. |

## 5.0 Residual Issues

Overall, construction activities were carried out with a high level of respect for the environment. There are no unresolved issues that remain at the time of completion of this report (September 2009) for the Vector Tie-in pipeline.

## 6.0 Landowner Comments and Complaints

There were no landowner comments or complaints associated with the construction of the Vector Tie-In pipeline.

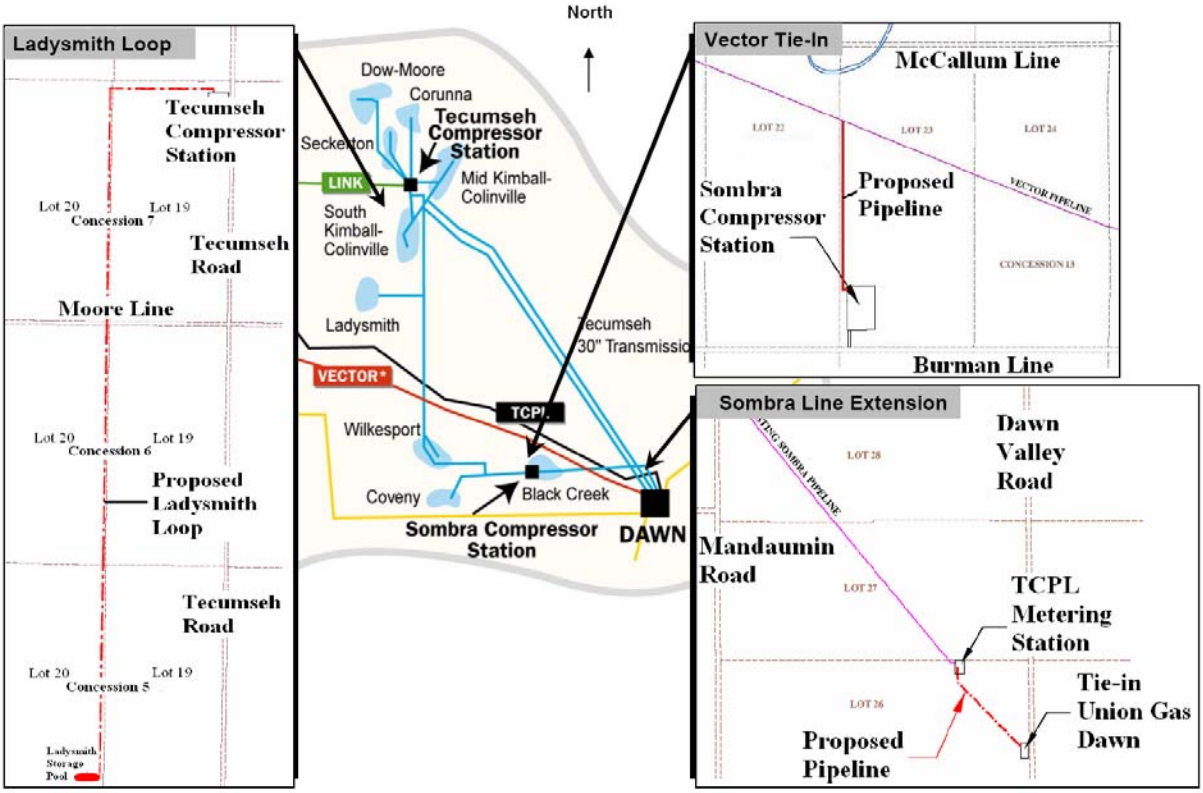
## 7.0 Summary

This Interim Post-Construction Environmental Monitoring Report has been prepared in accordance with the OEB Decision Docket No. EB-2008-0888/EB-2008-0889/EB-2008-0890. It documents construction and clean-up activities between the winter (2008) and spring (2009). In general, measures implemented during construction and clean-up have been successful. The Final Post-Construction Environmental Monitoring Report will be prepared in the summer of 2010. This report will document continued restoration activities if needed, and address additional issues that may arise.

# APPENDIX A

# MAP OF VECTOR TIE-IN PIPELINE

Enbridge Gas Distribution Inc.
Proposed Tecumseh Storage Enhancement Project



# APPENDIX B

# PHOTO LOG

Photo 1 – Tie-in location at NPS 42 Vector pipeline

Photo 2 – Looking south towards Enbridge Sombra Compressor Facility

Photo 4: Looking south toward Enbridge Sombra Compressor Facility (pipeline easement evidenced by darker vegetation to the right of the agricultural field)

Photo 3: Looking south toward tie-in location at Enbridge Sombra Compressor Facility