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500 Consumers Road
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VIA RESS, EMAIL AND COURIER

January 21, 2016

Ms. Kirsten Walli
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 26th Floor
Toronto, ON M4P 1E4

Re: Enbridge Gas Distribution Inc. ("Enbridge")
Ontario Energy Board ("Board") File No.: EB-2015-0303
Application to Drill Wells in a Designated Storage Area

In accordance with the Ontario Energy Board's (the "Board") Procedural Order issued for the above noted proceeding, enclosed please find the interrogatory responses of Enbridge.

The responses are arranged as follows:

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I-1-1 Page 1 to 2
I-1-2 Pages 3 to 78
I-1-3i Pages 79 to 84
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MNRF:
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Please contact the undersigned if you have any questions.

Sincerely,

(Original Signed)

Edith Chin
Senior Manager, Upstream Regulatory Strategy

cc: Demetrius Kappos, Counsel, Ministry of Natural Resources (via email)

BOARD STAFF INTERROGATORY #1

INTERROGATORY

Reference: Evidence, Letter dated November 6, 2015 to the Ministry of Natural Resources and Forestry (MNRF) from Enbridge, page 1.

Preamble: In the letter to the MNRF, which accompanied the application for the well drilling licences, Enbridge indicates that the Risk Assessment has been initiated and will be submitted to the MNRF for review.

a) Please provide a status update on the Risk Assessment completion and indicate expected time of submission to the MNRF.

b) Please describe the scope and purpose of the Risk Assessment and a process of review and assessment by the MNRF.

RESPONSE:

a) The Risk Assessment has been completed. It was forwarded to Mr. Jug Manocha (via Mr. Chad Coxon) of MNRF on January 12, 2016.

b) The purpose of the Risk Assessment is to study the Corunna Pool facilities as a whole and examine the potential risk to the public and Enbridge personnel and to create a plan to manage and alleviate any risk.

The scope can be found in Section 7.1 of CSA Z341.1-14:

> 7.1 Risk Assessment
> Operator shall
> (a) establish, document, implement, and maintain a risk assessment process to effectively identify risks associated with underground storage facilities;
> (b) perform baseline risk assessments for all new reservoir storage development;
> (c) evaluate the severity of the identified risks;
> (d) develop a process to manage and mitigate risks;
> (e) review and update the risk assessment when changes to the facility are made; and
> (f) retain records of the risk assessment for a period of 15 years after the decommissioning of the storage facility.

Witness: K. McConnell

The Risk Assessment is submitted to the MNRF for review and approval. The review process may include meetings and/or correspondences where Enbridge personnel will respond to any questions the MNRF may have. Please also see response to Board Staff Interrogatory #3, found at Exhibit I-1-3i (b).

BOARD STAFF INTERROGATORY #2

INTERROGATORY

Reference: Evidence, Letter dated November 6, 2015 to the MNRF from Enbridge, page 2.

Preamble: The letter states that an Environmental Screening has been started and will be submitted to the OEB and the MNRF by the end of November 2015.

Regarding the Environmental Screening report, please indicate when is Enbridge expected to file it with the OEB and the MNRF.

RESPONSE:

The Environmental Screening report was submitted to the MNRF on January 5, 2016.

Attached is a copy of the report (Appendix A).

Witnesses: S. Kingdon-Benson
K. McConnell
H. Steinberg

Corunna 3 Horizontal Well and Pipeline: Environmental Screening Report

FINAL REPORT

Prepared for:
Enbridge Gas Distribution Inc.
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North York ON M2J 1P8

Prepared by:
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File No. 160961088
December 3, 2015

This document entitled Corunna 3 Horizontal Well and Pipeline: Environmental Screening Report was prepared by Stantec Consulting Ltd. ("Stantec") for the account of Enbridge Gas Distribution Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Steve Thurtell
(signature)

Steve Thurtell, M.Sc., P. Ag., CISEC
Senior Environmental Scientist

Reviewed by
(signature)

David Wesenger, BES
Environmental Services Managing Leader, Senior Principal

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Executive Summary

In order to replace lost deliverability due to the abandonment of two gas storage wells and the conversion of one gas storage well in the Corunna Designated Storage Area (DSA) to an observation well, Enbridge Gas Distribution Inc. (EGDI) is proposing the construction and operation of a horizontal natural gas well, and a 10-inch steel natural gas pipeline 21.6 metres (m) in length connecting the horizontal well to the existing Corunna Gathering Line (the Project). The horizontal well is approximately 300 m in length and approximately 680 m in depth. The Project is located approximately four kilometres (km) east of the town of Corunna, Township of St. Clair, Ontario. EDGI has retained Stantec Consulting Ltd. (Stantec) to conduct an Environmental Screening of the Project and prepare this Environmental Screening Report (ESR).

In 2010, EGDI planned the NEXUS Project which involved increasing their natural gas storage capacity in Ontario and refining their transmission network to meet increasing demand for natural gas. In November 2010, Stantec Consulting Ltd. (Stantec) prepared an Environmental Report (ER) for a component of the NEXUS Project; the EGDI Dow Moore, Corunna and Seckerton Pipeline Project. The ER was submitted to the Ontario Energy Board (OEB) as part of EDGI's Leave-to-Construct application and was approved by the OEB. The study area for the Dow Moore, Corunna and Seckerton Pipeline Project includes the Study Area for this ESR.

In April 2011, Stantec prepared an Environmental Screening Report (ESR) for the replacement of the Corunna Gathering Line (Corunna GL), another component of the NEXUS Project. The Corunna GL replacement did not require Leave-to-Construct from the OEB. The study area for the Corunna GL also includes the Study Area for this ESR.

This Report describes the environmental and socio-economic features that occur in the Study Area and predicts the potential impacts of the Project on physical features, the natural environment and socio-economic features. Where potential impacts are anticipated to occur, mitigation measures are recommended.

Potential impacts on physical features include soil compaction, erosion and contamination; water taking; and damage to tile drainage. A summary of mitigation measures recommended for physical features are as follows: soils from all fields within the Study Area should be sampled and analyzed prior to construction to identify the current status of SCN, and a SCN Mitigation Plan for the Project should be developed prior to construction; heavy clay should be replaced at the same depth where it originated, or removed from the site; soil stockpiles should be protected against wind erosion if it should become a problem; severed or damaged tiles should be flagged when encountered, and where possible they should be temporarily repaired for the duration of construction and permanently repaired after construction; and topsoil should be stripped and stockpiled during construction and subsequently replaced at the completion of construction efforts.

Habitat to support species of conservation concern is not present within the Study Area. The Study Area is composed of agricultural land, farm-related buildings, and industrial infrastructure. There are no designated natural environment features; no candidate significant wildlife habitat and no habitat for species at risk present in the Study Area. As a result, no potential impacts to the natural environment were identified and no site specific mitigation measures are required.

Species at risk are known to occur in vicinity of the Study Area, but these species are not likely to enter the Study Area given the lack of habitat. In the highly unlikely event that a species at risk enters the workspace (e.g., Butler's Gartersnake), it will be undisturbed and allowed to leave the Study Area of its own accord. Therefore, there are no ongoing wildlife studies pertaining to the Project.

Potential impacts to socio-economic features include striking or interfering with utilities located and interfering with archeological finds within the Study Area during construction. EGDI should identify and locate all utilities prior to initiation of construction and consult with the owner of the utility regarding appropriate safety measures to be undertaken in association with the utility during construction. During construction, steel plates will be placed over the existing Corunna Gathering Line, and during drilling it will be taken out of service and its operating pressure will be reduced to zero pounds per square inch.

Stage 1 and 2Archaeological Assessments (AA) were completed in 2011 for the Enbridge NEXUS Project. The area assessed for the Stage 1 and 2 AAs included the Study Area for this ESR. Based on the results of the Stage 2 AA during Phase 3 of the NEXUS Project, the location of the proposed well and pipeline have been cleared for construction activity and therefore no mitigation measures to address archaeological remains are required.

If historical soil contamination or a potential archaeological find is identified at this site, construction should cease temporarily until suitable mitigation measures are developed and implemented.

With the implementation of the recommendations in this ESR and adherence to permit, regulatory and/or legislative requirements, the potential environmental and/or socio-economic impacts of the Project are not anticipated to be significant.

Abbreviations

Asl	Above sea level
Corunna GL	Corunna Gathering Line
EGDI	Enbridge Gas Distribution Inc.
ER	Environmental Report
ESR	Environmental Screening Report
ESA	Environmentally Significant Area
Km	Kilometres
LIO	Land Information Ontario
M	Metres
MNR(F)	Ministry of Natural Resources (and Forestry)
MOECC	Ministry of the Environment and Climate Change
NHIC	Natural Heritage Information Centre
OP	Official Plan
OEB	Ontario Energy Board
PSW	Provincially Significant Wetland
SCN	Soybean Cyst Nematode
SARO	Species at Risk in Ontario
Stantec	Stantec Consulting Ltd.
SCRCA	St. Clair Region Conservation Authority

1.0 INTRODUCTION

1.1 DESCRIPTION AND PURPOSE OF THE PROJECT

In order to replace lost deliverability due to the abandonment of two gas storage wells and the conversion of one gas storage well in the Corunna Designated Storage Area (DSA) to an observation well, Enbridge Gas Distribution Inc. (EGDI) is proposing the construction and operation of a horizontal natural gas well, and a 10-inch steel natural gas pipeline 21.6 metres (m) in length connecting the horizontal well to the existing Corunna Gathering Line (the Project). The horizontal well is approximately 300 m in length and approximately 680 m in depth. The Project is located approximately four kilometres (km) east of the town of Corunna, Township of St. Clair, Ontario. EDGI has retained Stantec Consulting Ltd. (Stantec) to conduct an Environmental Screening of the Project and prepare this Environmental Screening Report (ESR).

1.2 DEFINITION OF THE STUDY AREA

The proposed well system and pipeline are located in the Corunna DSA on the east side of Lot 20, Concession 10 in the Township of St. Clair, County of Lambton, Ontario. For this ESR, the Study Area is approximately 400 m from the centerline of the proposed well head and pipeline. This area is comprised primarily of active agricultural fields, an access road, overhead electrical lines, existing wells and buried pipelines, as well as a portion of regulated area of the St. Clair Region Conservation Authority (SCRCA).

The Study Area is shown on Figure 1, Appendix A.

1.3 BACKGROUND INFORMATION

In 2010, EGDI planned the NEXUS Project which involved increasing their natural gas storage capacity in Ontario and refining their transmission network to meet increasing demand for natural gas. In November 2010, Stantec Consulting Ltd. (Stantec) prepared an Environmental Report (ER) for a component of the NEXUS Project; the EGDI Dow Moore, Corunna and Seckerton Pipeline Project. The ER was submitted to the Ontario Energy Board (OEB) as part of EDGI's Leave-to-Construct application and was approved by the OEB. The study area for the Dow Moore, Corunna and Seckerton Pipeline Project includes the Study Area for this ESR, with a few of its project components shown as existing wells and pipelines on Figure 1, Appendix A.

In April 2011, Stantec prepared an Environmental Screening Report (ESR) for the replacement of the Corunna Gathering Line (Corunna GL), another component of the NEXUS Project. The Corunna GL replacement did not require Leave-to-Construct from the OEB. The study area for the Corunna GL also includes the Study Area for this ESR. The existing Corunna GL is shown on Figure 1, Appendix A.

1.4 REPORT OBJECTIVES

The purpose of this ESR is to:

- Identify the environmental constraints associated with the proposed location of the Project; and
- Recommend mitigation and/or restorative measures necessary to prevent or minimize potential negative impacts caused by the Project.

1.5 APPROVAL PROCESS AND REGULATORY REQUIREMENTS

In 1998, the OEB established guidelines for the expansion of natural gas service in its EBO 188 Report on Natural Gas Distribution System Expansion (EBO 188). The Environmental Screening for this project was conducted following generally accepted principles of environmental screening as outlined in the OEB's EBO 188 Report. The ESR also refers to EGDI's generic planning and construction manuals: Environmental Guidelines for Construction (June 2012), Construction and Maintenance Manual (2015), and Reference Manual for the Environmental Screening Checklist (July 2012).

2.0 ENVRONMENTAL SCREENING AND RECOMMENDED MITIGATION MEASURES

This Report describes the environmental and socio-economic features that occur in the Study Area (Figure 1, Appendix A) and predicts the potential impacts of the Project on physical features, the natural environment and socio-economic features. Where potential impacts are anticipated to occur, mitigation measures are recommended.

2.1 PHYSICAL FEATURES

2.1.1 Geology

The Quaternary Geology of Southern Ontario describes the soil deposits of the Study Area as glaciolacustrine deposits: silt, clay, and minor amounts of sand formed in basins and quiet water areas (Barnett et. al, 1991). Around the Study Area, there is a potential for heavy clay deposits to be found under the surface horizons, especially at deeper excavation points. During construction, this dense, uniformly grained soil is susceptible to rutting and compaction which can severely reduce agricultural productivity if replaced near the soil surface following soil stripping. If encountered during construction, this heavy clay should not be mixed with the soils found in the upper horizons.

Mitigation Measures

To avoid negative impacts to agricultural lands, heavy clay should be replaced at the same depth where it originated, or removed from the site. The Project NEXUS Phase 1 Environmental Protection Plan – Rev 2 (June 2011) details heavy clay identification and handling procedures. The same procedures should be applied to avoid a negative impact to agricultural capability as a result of the Project.

2.1.2 Physiography and Topography

The Project is located in the St. Clair Clay Plains physiographic region (Chapman and Putnam, 1984). This region has little relief and lies between 175 and 213 m above sea level (asl). A survey completed by Brisco and O'Rourke (October 2015) reports the well head to be located 196.72 m asl. There is a deep overburden on the bedrock with a fairly uniform bed of clay before striking solid rock. This area of the St. Clair Clay Plains physiographic region is underlain by black shale.

Soil within the Study Area is fine textured. Topsoil and subsoil stockpiles may be eroded by wind erosion during dry, windy weather.

Mitigation Measures

Soil stockpiles should be protected against wind erosion if it should become a problem. Potential mitigation measures include: spreading straw, seeding soil piles in advance applying water or tackifiers to stabilize the exposed topsoil and subsoil.

2.1.3 Soil

The Soil Survey of Lambton County indicates that the Study Area includes Brookston clay as the only soil type (Mathews et. al, 1957). The Brookston series are the poorly drained soils of the Huron Catena. The Brookston clay is the only Brookston soil found in Lambton County.

The agricultural lands in the Study Area are rated as Class 2 in the Canada Land Inventory for Agriculture (Land Inventory Ontario (LIO), 2015). Poorly drained soils, such as Brookston soil, become more agriculturally productive when drainage is improved. As a result, agricultural tile drainage has been installed in most agricultural fields in the area. The field where construction activities are planned is mapped as randomly tile drained. Reportedly, these tiles may be found less than three feet from the surface. Therefore, there is the potential to interrupt buried artificial drainage infrastructure during construction. There is also potential to reduce the agricultural capability in the construction areas by damaging the soil through mixing of topsoil with subsoil, erosion of topsoil and deep compaction.

The Project is located on a single parcel which includes active agriculture and mowed lawn. The presence of tile drain will reduce ponding of precipitation from occurring on the level land surface.

In southwestern Ontario, soybean cyst nematode (SCN) is present in the topsoil of many agricultural fields in populations large enough to impact soybean yields. SCN can spread many ways such as by the wind, by animals, or in topsoil stuck to machinery as the machinery passes from an impacted field to a non-impacted field. The agricultural soils of fields within the Study Area were sampled and analyzed for SCN in 2011. The SCN sampling concluded that the field where construction activities are planned did not have SCN present, but that adjacent fields did have SCN present. There is a potential that SCN has spread from an adjacent impacted field to the proposed construction area since 2011.

The potential for heavy clay to be encountered in deeper excavations is discussed in Section 2.1.1.

Mitigation Measures

Severed or damaged tiles should be flagged when encountered, and where possible they should be temporarily repaired for the duration of construction to maintain the integrity of internal drainage patterns. If this is not feasible, severed tiles should be plugged so that

construction areas are not flooded with tile drainage water during rain events. Tiles should be permanently repaired when construction is complete.

A laneway and temporary drilling pad will be constructed as part of the Project. The drilling pad will be approximately 7315 m^2. To construct the drilling pad, top soil will be stripped and geotextile matting will be laid and gravel will be placed on top. To preserve the quality of topsoil, it should be stripped and stockpiled separate from subsoil during construction and subsequently replaced at the completion of construction efforts.

Since ponded precipitation water within the Study Area should drain through the drainage tiles, no mitigation measures related to drainage are recommended.

Soils from all fields within the Study Area should be sampled and analyzed prior to construction to identify the current status of SCN. The SCN Test Results and Mitigation Plan included in the Project NEXUS Phase 1 Environmental Protection Plan – Rev 2 (June 2011) should be reviewed. Depending on the results of the samples, a new a SCN Mitigation Plan for the Project should be developed prior to construction. The plan should include measures to prevent soil from being transported on machinery, or by other means, from an SCN impacted field to a non-impacted field.

2.1.4 Specialty Crop Lands

The crops on the agricultural lands within the Study Area are identified by Ontario Ministry of Agriculture Food and Rural Affairs (1983) as continuous row crop, corn system, and mixed systems. These systems likely rotate and include winter wheat. These are not specialty crops and these lands are not considered to be within Ontario's specialty crop lands.

Mitigation Measures

Since the Study Area is not on specialty crop land and does not contain specialty crops, mitigation measures for protecting specialty crop lands are not required.

2.1.5 Hydrogeology

Ministry of the Environment and Climate Change (MOECC) water well records report that there are three water wells within the Study Area. The MOECC Well ID numbers, static depth and location of the three water wells are provided below in Table 2.1.

Table 2.1: Water Wells Located in the Study Area

MOE Well ID #	Static Level (ft)	Well Location
3403273	40	In active agricultural field
3401730	23	In active agricultural field
3401711	24	In active agricultural field

Locations of the three water wells are shown on Figure 1, Appendix A.

It is reported that residences in the Study Area obtain domestic water through municipal water services. A buried municipal waterline is located in the Petrolia Line road allowance. The wells in the Study Area are likely used solely for outdoor applications such as watering gardens. Water needed during construction will be taken from the municipal system at the Brigden and Mooretown stations.

Pumping of groundwater is not anticipated during construction of the proposed well and pipeline.

Mitigation Measures

A qualified professional hydrogeologist should be consulting to determine the need for a well monitoring program and other potential mitigation measures.

2.2 NATURAL ENVIRONMENT FEATURES

2.2.1 Woodlots

There are no woodlots located within the Study Area. The Project will occur entirely on agricultural fields with access along an existing access road.

Mitigation Measures

The Project will have no impacts on woodlots, and therefore mitigation measures are not required.

2.2.2 Environmentally Sensitive Areas

According to the Lambton County Official Plan (OP), the nearest environmentally significant area (ESA) is the Burton Drain Woodlot Provincially Significant Wetland (PSW) located approximately two km southeast of the Study Area. According to Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario (LIO) mapping, surface runoff water flows northwest from the Study Area and southeast from the Burton Drain Woodlot PSW. Therefore, surface runoff in the Study Area would flow away from the Burton Drain Woodlot PSW. As such, impacts to the Burton Drain Woodlot PSW or any other ESA's or wetlands are not anticipated as a result of the Project.

Mitigation Measures

Since no impacts to ESAs or PSWs are anticipated as a result of the Project, no mitigation measures are required.

2.2.3 Watercourses

There are no watercourses identified within the Study Area, although, there is a constructed agricultural drain that runs north-south that touches the northwest edge of the Study Area. The agricultural drain flows into a municipal drain along Petrolia Line. Impacts to these drains are not anticipated as a result of the Project.

Constructed drains are shown on Figure 1, Appendix A.

Mitigation Measures

Since no impacts to drains or watercourses are anticipated as a result of the Project, no mitigation measures are recommended.

2.2.4 Wetlands

There are no wetlands identified in the Study Area. The closest wetland is the Burton Drain Woodlot PSW located approximately two km southeast of the Study Area. Impacts to wetlands are not anticipated as a result of the Project.

The Study Area and proposed horizontal well extend into a regulated area of the SCRCA, however, no disturbance is planned within the SCRCA regulated area. An existing private access road that traverses the regulated area will be used during construction of the Project and the proposed horizontal is approximately 680 m below ground. The SCRCA has confirmed that EGDI is not required to secure a permit for the Project under Ontario Regulation 171/06.

Mitigation Measures

Since no impacts to wetlands are anticipated as a result of the Project, no mitigation measures are recommended.

2.2.5 Wildlife Habitat

The Study Area does not include any wetlands or woodlands and is comprised entirely of active agricultural fields (i.e. soybean, wheat, and corn) with scattered farm-related buildings, industrial infrastructure and facilities (i.e. wells, pipelines).

A background review of the Study Area did not identify any known seasonal concentration areas associated with birds (i.e. known migration stopover or staging areas, colonies, roosting areas or wintering areas) (IBA Canada, undated; LIO 2015). There are no identified Ramsar sites (Ramsar, 2015), Western Hemisphere Shorebird Reserve Network sites (WHSRN, 2015), UNESCO biosphere reserves (UNESCO, 2015), or migratory bird sanctuaries (Environment Canada, 2015) within 5 kilometers of the Study Area.

The Study Area is not located in close proximity to a lake shore (i.e. approximately 15 km from Lake Huron and 35 km from Lake St. Clair), and does not contain features that would concentrate migrating birds (i.e. shorelines, large lakes, peninsulas).

No wildlife corridors were identified within the Study Area (Lambton County Official Plan, 1998).

2.2.5.1 Significant Wildlife Habitat

Criteria outlined in the Significant Wildlife Habitat Technical Guide (MNR, 2000) and Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015) were used to determine whether the Study Area contained candidate significant wildlife habitat. Candidate significant wildlife habitat that was identified within the Study Area is discussed below.

Habitats of Species of Conservation Concern

A background review (Natural Heritage Information Centre (NHIC) 2015; Cadman et al., 2007) has identified several species of conservation concern that are known to occur in the vicinity of the Study Area. These species are summarized in Table 2.1. None of these species are likely to occur given the habitat within the Study Area (i.e., active agriculture, industrial infrastructure).

Table 2.2: Species of Conservation Concern Potentially Occurring within the Study Area

Species	*Scientific Name*	S-Rank
American Brook Lamprey	*Lampetra appendix*	S3
Carolina Whitlow-grass	*Draba reptans*	S3
Fern-leaved Yellow False Foxglove	*Aureolaria pedicularia*	S2?
Hairy Hawkweed	*Hieracium longipilum*	SX
Hairy Pinweed	*Lechea mucronata*	S3
Mead's Sedge	*Carex meadii*	S2
Rigid Sedge	*Carex tetanica*	S3
Round-fruited Panicgrass	*Dichanthelium sphaerocarpon*	S3
Texas Stiff Yellow Flax	*Linum medium var. texanum*	S1
White-haired Panicgrass	*Dichanthelium praecocius*	S3

Table 2.2: Species of Conservation Concern Potentially Occurring within the Study Area

Species	*Scientific Name*	S-Rank
Woodland Pinedrops	*Pterospora andromedea*	S2
Yellow Stargrass	*Hypoxis hirsute*	S3

NOTE:

S1: Critically Imperiled—Critically imperiled in the province (often 5 or fewer occurrences)

S2: Imperiled—Imperiled in the province, very few populations (often 20 or fewer)

S3: Vulnerable—Vulnerable in the province, relatively few populations (often 80 or fewer)

SX: Presumed extirpated

?: Denotes uncertainty in the assigned rank

The Ontario Partners in Flight (PIF) program has identified a number of species that are considered conservation priorities for Bird Conservation Region 13 (Lower Great Lakes/St. Lawrence Plain region of southern Ontario) (Ontario PIF, 2008). A review of background material (e.g., Cadman *et al.*, 2007) has identified nine PIF priority species that are known to occur in proximity of the Study Area. There is no habitat to support any of the identified PIF species in the Study Area (i.e. woodlands, grasslands).

Summary of Significant Wildlife Habitat

The Study Area is composed of agricultural land and industrial buildings. There are no designated natural environment features; no candidate significant wildlife habitat and no potential habitat for species of conservation concern in the Study Area. As a result there are no potential impacts on significant wildlife habitat, the natural environment and no site specific mitigation measures are required.

2.2.6 Species at Risk

Species listed as endangered or threatened on the Species at Risk in Ontario List (SARO) are protected by the Endangered Species Act, 2007. The Act provides protection for both the individuals and their habitat.

The Project occurs entirely within active agricultural fields of corn, soybean and wheat; features which are not anticipated to provide habitat for threatened or endangered species. Table 2.2 identifies 7 species at risk known to potentially occur within the vicinity of the Study Area, identified through a background review of the NHIC database in 2015 as well as consultation with the MNR in 2010 for the overlapping NEXUS Project. A follow up letter for this project was sent to the Aylmer District MNRF on November 17, 2015 to confirm with the MNRF that there are

no Endangered Species Act considerations as a result of the Project. No response from the MNRF has been received to-date.

Table 2.3: Summary of Threatened and Endangered Species known to occur in the general vicinity of the Study Area

Common Name	Scientific Name	SRANK	Provincial Status (COSSARO)	National Status (COSEWIC)	Habitat	Source
Spoon-leaved Moss	*Bryoandersonia illecebra*	S1	END	END	Forest, Swamp	MNR correspondence (2010)
American Columbo	*Frasera caroliniensis*	S2	END	END	Forest openings, thicket	NHIC 2015
Colicroot	*Aletris farinosa*	S2	THR	THR	Prairie	NHIC 2015/ MNR correspondence (2010)
Dense Blazing Star	*Liatris spicata*	S2	THR	THR	Prairie	NHIC 2015/ MNR correspondence (2010)
Butternut	*Juglans cinerea*	S3?	END	END	Woodland and hedgerows	MNR correspondence (2010)
Butler's Gartersnake	*Thamnophis butleri*	S2	THR	END	Meadows, hedgerows	NHIC/ MNR correspondence (2010)
Massasauga	*Sistrurus catenatus catenatu*	S3	THR	THR	Shorelines and wetlands	NHIC 2015

Mitigation Measures

No species at risk are expected to occur within the Study Area due to a lack of suitable habitat. As a result no mitigation measures are recommended. In the highly unlikely event that a species at risk enters the workspace (e.g., Butler's Gartersnake), it will be undisturbed and allowed to leave the Study area of its own accord. The MNRF will confirm whether there are any potential Endangered Species Act implications for the Project. No response from the MNRF has been received to-date.

2.3 SOCIO-ECONOMIC FEATURES

2.3.1 Transportation Corridors and Easements

The northern portion of the Study Area is intersected by Petrolia Line between Ladysmith Road and Tecumseh Road. The Study Area is also intersected by private roads maintained by EGDI

and used to access land and facilities located at the back of the properties in the Study Area. No work is anticipated to occur within existing road allowances. During construction, there may be a minor increase to road traffic experienced by motorists using Petrolia Line, however, no measurable impact to these transportation corridors is anticipated.

Mitigation Measures

Since no impacts to local transportation corridors are anticipated, no mitigation measures are recommended.

2.3.2 Utility Corridors and Facilities

The Study Area contains an existing north-south utility corridor which includes the following utilities: the Corunna GL, a Hydro One high voltage electrical transmission line, a low voltage electrical line owned by EGDI, a crude oil pipeline and a gas pipeline. The proposed well and pipeline will connect to the Corunna GL, which is located more than 100 m west of the nearest utility within the corridor.

EGDI also owns and operates several natural gas and oil wells in the Study Area that connect to underlying storage pools. The gas wells are connected to the Corunna GL and are used to inject and withdraw natural gas from the storage pools.

It is reported that residences in the Study Area obtain domestic water through municipal water services. A buried municipal waterline is located in the Petrolia Line road allowance.

There is a potential to strike or interfere with a utility located within the Study Area during construction if the utilities are not properly located and marked.

Existing utilities are shown on Figure 1, Appendix A.

Mitigation Measures

EGDI should identify and locate all utilities prior to initiation of construction and consult with the owner of the utility regarding appropriate safety measures to be undertaken during construction. During construction, steel plates will be placed over the existing Corunna Gathering Line. During drilling of the proposed well, the Corunna Gathering Line will be taken out of service and its operating pressure will be reduced to zero pounds per square inch.

2.3.3 Archaeological Resources

Stage 1 and 2Archaeological Assessments (AA) were completed in 2011 for the NEXUS Project. The area assessed for the Stage 1 and 2 AAs included the Study Area for this ESR. Based on the results of the Stage 2 AA of Phase 3 of the NEXUS Project, the location of the proposed well and pipeline have been cleared for construction activity. No further archaeological work was

recommended at for this area. A copy of the Stage 2 AA of Phase 3 of the NEXUS Project is included in Appendix B.

Mitigation Measures

Since the location the location of the proposed well and pipeline have been cleared for construction activity as per the results of the Stage 2 AA of Phase 3 of the NEXUS Project, no mitigation measures are recommended.

3.0 CONCLUSION

This ESR has considered potential impacts on physical features, the natural environment and socio-economic features within the Study Area, and includes recommendations for mitigation measures, where necessary. In the opinion of Stantec, the recommended mitigation measures are sufficient to protect the features encountered from any potential impacts arising from the Project.

If historical soil contamination or a potential archaeological find is identified at this site, construction should cease temporarily until suitable mitigation measures are developed and implemented.

With the implementation of the recommendations in this ESR and adherence to permit, regulatory and/or legislative requirements, the potential environmental and/or socio-economic impacts of the Project are not anticipated to be significant.

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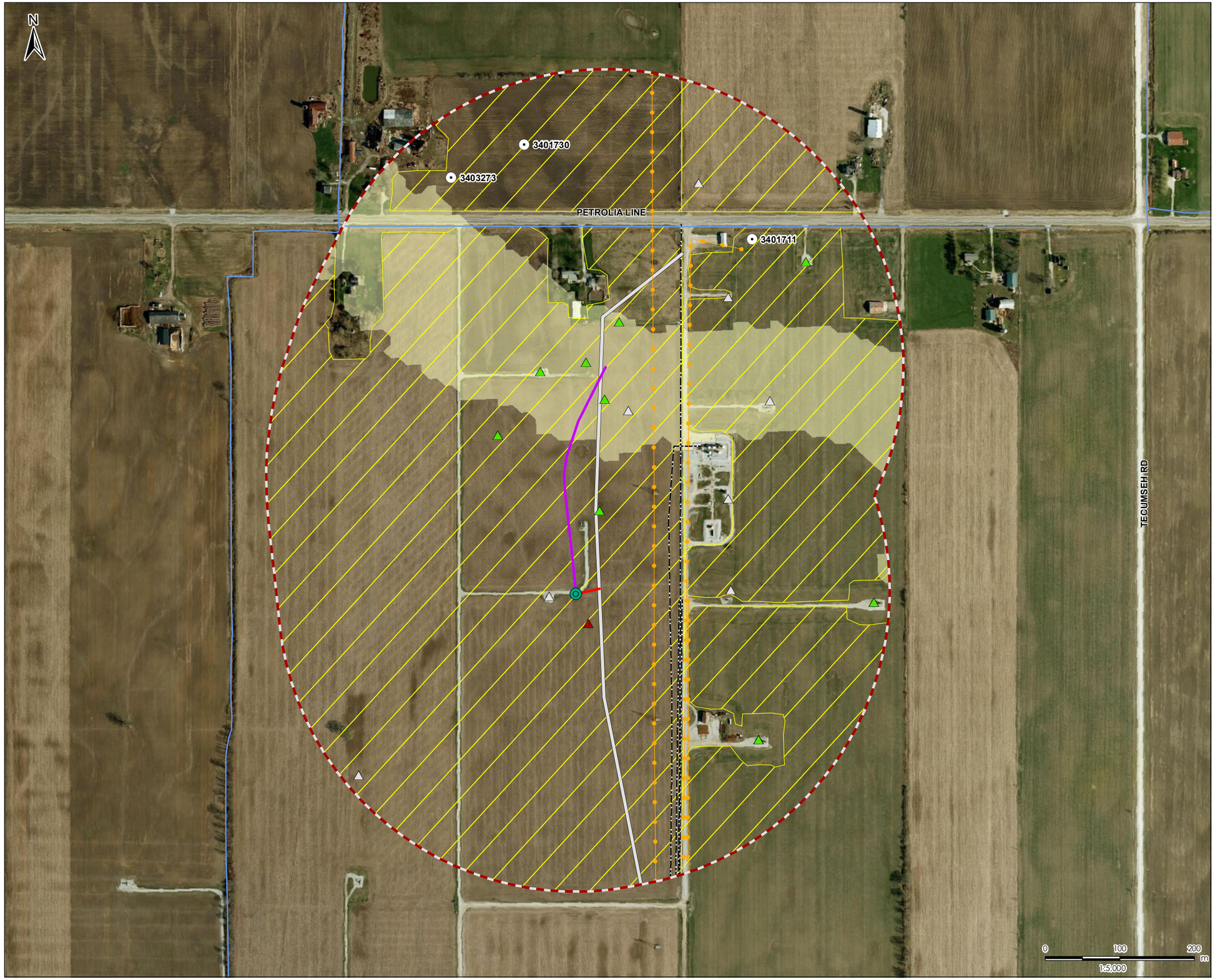
APPENDIX A: REPORT FIGURES

Stantec



Stantec

Legend

- Proposed Well Head
- Proposed Horizontal Well
- Proposed Pipeline
- Study Area (400 m)
- Water Well (MOECC)

Gas Well Mode

- Abandoned Gas Well
- Active Gas Well
- Suspended Gas Well
- Constructed Drain
- Existing Corunna Gathering Line
- Existing Pipeline
- Electrical Transmission Line
- St. Clair CA Regulated Area

Tile System Type

- Random

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2010.

December 2015
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Client/Project
Enbridge Gas Distribution Inc.
Corunna 3 Horizontal Well and Pipeline

Figure No.
1

Title
Environmental and Socio-Economic Features

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Revised: 2015-12-01 By: mkraus

APPENDIX B: ARCHAEOLOGICAL REPORT

Stantec

The June 10, 2011 Stage 2 Archaeological Assessment of Phase 3 of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lot 20, Concession 10, Township of St. Clair, Lambton County, Ontario

Submitted to

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and

The Ontario Ministry of Tourism and Culture

Prepared by

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Licensee: Sherri Pearce
Type of Report: Original

PIF #P316-125-2011

June 12, 2011

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Field Supervisor	Nancy VanSas (Licence #R323)
Field Assistants	Daniella Horley Rob Danter
Photography	Daniella Horley
Report Preparation	Dana R. Poulton Lorelyn Giese Sherri H. Pearce
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Acknowledgments

This assessment was facilitated by the following individuals and their agencies:

- ***Steve Thurtell,*** M.Sc., P. Ag., Project Manager, Environmental Assessment, Stantec Consulting Ltd.;
- ***Darrin J. Drumm***, Principal, Motu Marine & Environmental Consulting Ltd.;
- ***Terry Chupa***, Lands Agent and Lands Contract Manager; Enbridge Gas Distribution Inc.;
- ***Melissa Straus***, M.Sc., Biologist, Stantec Consulting Ltd.; and
- ***Shari Prowse***, Archaeological Review Officer, Culture Programs Unit, Ontario Ministry of Tourism and Culture.

Executive Summary

Stantec Consulting Ltd. (Stantec) has been retained by Enbridge Gas Distribution Inc. (Enbridge) to prepare an Environmental and Socio-Economic Assessment Report (ER) for a proposed natural gas development that is termed the NEXUS Project. It is located in Moore and Sombra Geographic Townships, Lambton County, Ontario. As described in Section 1.3 of this report (pages 11-14), there are several different elements to the overall NEXUS project. They include the proposed Dow Moore, Corunna and Seckerton Pipeline Project in the Township of St. Clair, just south of Sarnia. The overall project is part of the ongoing expansion of the gas storage system in the area and is required to meet increasing demand for natural gas service in the area.

In the fall of 2010 Stantec contracted D.R. Poulton & Associates Inc. to carry out a Stage 1 archaeological background study of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. The assessment considered data for two alternative alignments, designated Potential Route 1A and Potential Route 1B, in addition to the confirmed Proposed Route 2. It determined that no past archaeological investigations had been carried out within the lands that are involved in the proposed Dow Moore, Corunna and Seckerton Pipeline Project but that the alignments in question had a moderate potential for as-yet undiscovered Native and Euro-Canadian archaeological remains. Based on that, the assessment also determined that the proposed and potential facilities warranted a Stage 2 archaeological survey. A report on the Stage 1 study was completed on November 22, 2010 (D.R. Poulton & Associates Inc. 2010) and plans were made to conduct the archaeological survey in the spring of 2011.

In the spring of 2011 Stantec contracted D.R. Poulton & Associates Inc. to carry out a Stage 1 archaeological background study of the balance of the proposed facilities that will be involved in the overall NEXUS project as well as the Stage 2 archaeological survey of the proposed facilities. The survey has two objectives. One is to effect a field-based assessment of the lands

As described in Section 1.3 of this report (pages 11-14), investigations that are described in this report form part of an ongoing assessment. The Stage 2 survey of the subject lands commenced during the first week of May; the lands surveyed at that time are shown in Figure 3 as hatched areas. They included all of the lands that are involved in Phase 1 of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. The survey resulted in the discovery of a late 19th century Euro-Canadian refuse deposit (page 3). It was designated the Alexander site. A Stage 3 controlled surface collection and partial test excavations of the site were carried out at interval during the first two weeks of May 2011.

The findings from the partial Stage 3 investigations Alexander site and the Stage 2 survey conducted in the first week of May 2011 are the subject of a separate report and supplementary documentation that are on file with the Ministry of Tourism and Culture (DPA 2011a). Additional Stage 2 survey of the Phase 2 lands was conducted on May 19 and 25, 2011. They are also shown on Figure 3 as hatched areas. The separate report detailing the Stage 2 survey of Phase 2 of the proposed Dow Moore, Corunna and Seckerton Pipeline Project is also on file with the Ministry of Tourism and Culture (DPA 2011c).

As detailed in Section 2.0 of this report (page 17), on June 10, 2011 the survey personnel completed the five-metre interval Stage 2 pedestrian survey of Phase 3 of the proposed Dow

Moore, Corunna, and Seckerton Pipeline Project. Phase 3 includes of a segment of the Interconnect Pipeline north of the woodlot. It also includes the north-south segment of the Corunna Gathering Line. This portion of the project is entirely contained within Lot 20, Concession 10.

Figure 1 shows the location of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. Figure 2 shows the locations from which the three photographic plates that are illustrated in this report were taken. Figure 3 illustrates the various elements that are involved in the proposed Phase 3 construction of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It also illustrates the extent and technique of the archaeological survey that is documented in this report.

As stated in Section 3.0 of this report (page 19), the Stage 2 fieldwork documented in this report confirmed that there are no archaeological resources in the lands that are involved in Phase 3 of the proposed Dow Moore, Corunna and Seckerton Pipeline Project.

The recommendations that pertain to this assessment are presented in Section 5.0 (pages 22-24). As detailed therein, given the negative results of the June 10, 2011 Stage 2 assessment, it is recommended that no further archaeological investigations or concerns are warranted for Phase 3 of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It is also recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Ontario Public Register of Archaeological Reports, and that it include a statement of concurrence with the findings of the Stage 2 archaeological fieldwork that is documented in this report. Finally, it is requested that a copy of the letter be forwarded to Steve Thurtell, Project Manager, Environmental Management, Stantec Consulting Ltd. His e-mail address is steve.thurtell@stantec.com.

1.0 PROJECT CONTEXT

The 1993 technical guidelines for archaeological assessment formulated by the Ontario Ministry of Culture, Tourism and Recreation (now the Ministry of Tourism and Culture) (MCTR 1993) define up to four sequential stages in an archaeological assessment. The same applies to the new standards and guidelines formulated by the Ministry of Tourism and Culture (2011), which came into effect on January 1, 2011. Stage 1 consists of background research to identify any past archaeological investigations or known sites. The background study also identifies the potential for as-yet undiscovered sites. Stage 2 consists of a field survey to confirm the presence or absence of archaeological sites. Stage 3 consists of a more detailed assessment of any sites that are of demonstrable or potential significance as heritage resources and planning concerns. Finally, Stage 4 consists of the mitigation of significant sites by either avoidance and preservation or by the implementation of salvage excavations.

Section 7.2.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 115) states the following standard with respect to the reporting requirements for archaeological assessments: "The final report must be filed in the form and manner as specified by the ministry in Section 7.5."

Section 7.5.1 of the standards and guidelines (Ministry of Tourism and Culture (2011: 121) further states the following standard with respect to the reporting requirements for archaeological assessments: "All project reports must contain the sections listed in the first column of Table 7.1." The present report conforms in all respects to the reporting requirements of the 2011 standards and guidelines.

Section 7.5.5 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 124) requires that the Project Context section of each report includes the context for the archaeological investigations and that it cover three main areas: development context; historical context; and archaeological context. They are covered in the three subsections of this section of the report that are presented below.

1.1 Development Context

The information contained in this section of the report is being presented to satisfy the standards that are set out in Section 7.5.6.1, 7.5.6.2 and 7.5.6.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 124-125).

Stantec Consulting Ltd. (Stantec) has been retained by Enbridge Gas Distribution Inc. (Enbridge) to prepare an Environmental and Socio-Economic Assessment Report (ER) for a proposed natural gas development that is termed the NEXUS Project. It is located south of the City of Sarnia, in Lambton County, Ontario. There are several different elements to the overall NEXUS project. They include the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It is located in the Township of St. Clair. Figure 1 shows the location of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. Figure 2 shows the location of the three points from which the photographic plates that are illustrated in this report were taken. Figure 3 illustrates the

various elements that are involved in the proposed Phase 3 construction of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It also shows the extent and techniques of the archaeological survey that is documented in this report.

The overall NEXUS Project is part of the ongoing expansion of the gas storage system in the area that is required to meet increasing demand for natural gas service in the area. The Stantec ER was created to meet the requirements of the Ontario Energy Board's ("OEB") Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon pipelines and facilities in Ontario (May 2003).

The standard concerning permission for access that is specified in the standards and guidelines is as follows: "Provide statements that the landowner or landowner's representative (e.g. planner, engineer, lawyer) gave permission for the licensee to access the property to conduct all required archaeological fieldwork activities, including the recovery of artifacts, and state any limits placed on access (e.g. time limits, refusal of access to portions of property)" (Ministry of Tourism and Culture 2011, Section 7.5.6.3, pages 125). In the present case, the survey that is documented in this report involved the proposed facilities that form part of four individuals' landholdings. Permission from the owners for access to conduct the archaeological survey and to removed and curate any artifacts that might be discovered was secured in advance of the fieldwork by Enbridge, the proponent for the proposed Dow Moore, Corunna and Seckerton Pipeline Project and the greater NEXUS Project.

The Ontario Ministry of Tourism and Culture designated the assessment as PIF #P316-125-2011. The assessment was conducted under Archaeological Consulting Licence #P316, issued by the Province of Ontario to Sherri Pearce of D.R. Poulton & Associates Inc. It was carried out in accordance with the provisions of the *Ontario Heritage Act* (Government of Ontario RSO 1990a), and the requirements of the Ontario Energy Board's ("OEB") Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon pipelines and facilities in Ontario (May 2003). Finally, the assessment confirmed with the technical standards and guidelines for archaeological assessment formulated by the Ontario Ministry of Tourism and Culture (2011).

Further to the above, the assessment was also conducted in accordance with the 2005 Provincial Policy Statement 2.6.2, which has provisions for the conservation of archaeological resources, a definition of the same, and provisions for archaeological assessments. Finally, it was conducted in accordance with the Ontario Ministry of Culture's 2006 Heritage Tool Kit, most particularly with respect to Infosheet #3 and Infosheet #6; they detail provisions for the conservation of archaeological resources and provisions for heritage impact statements, respectively.

The new standards and guidelines formulated by the Ministry of Tourism and Culture (2011) include provisions for aboriginal engagement in the course of archaeological assessments and environmental assessments. In conducting the environmental assessment of the proposed Dow Moore, Corunna and Seckerton Pipeline Project and the NEXUS Project, Stantec Consulting Ltd. consulted with Chief Chris Plain of Aamjiwnaang First Nation, Chief Tom Bressette of the Chippewas of Kettle and Stony Point and Chief Dean Jacobs of Walpole Island First Nation.

The records pertaining to this project are currently housed in the corporate offices of D.R. Poulton & Associates Inc. If the opportunity permits, however, the project archive will be transferred to a suitable long term repository. Potential repositories include local or other

museums and the storage facilities maintained by the London office of the Ontario Ministry of Tourism and Culture.

1.2 Historical Context

Under the current standards and guidelines, a required standard for the Historical Context section of a report is that it must include a statement concerning the rationale for fieldwork strategy (Ministry of Tourism and Culture 2011: Section 7.5.6.2, page 125). A more detailed discussion of the events leading up to the fieldwork that is described in this report is presented in Section 1.3 of the present report. In the interests of satisfying the standard in Section 7.5.6.2, a brief summary of the historic context for the present assessment is presented below.

In the fall of 2010 Stantec contracted D.R. Poulton & Associates Inc. to carry out a Stage 1 archaeological background study of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It forms part of the greater NEXUS Project. A report on the Stage 1 study was completed on November 22, 2010 (D.R. Poulton & Associates Inc. 2010) and plans were made to conduct the archaeological survey in the spring of 2011. The authors of the 2010 Stage 1 report were Dana Poulton and Nancy VanSas. The pertinent assessment was carried out under PIF #P316-113-2011 and Licence # P316, issued to Sherri Pearce of D.R. Poulton & Associates Inc.

The Stage 2 survey was implemented during the first two weeks of May 2011. It included the priority lands that had been designated Phase 1 of the proposed development. The fieldwork also included a partial Stage 3 assessment of a late historic refuse deposit that is designated the Alexander site. The fieldwork in question was the subject of a report package that was submitted to the Ministry of Tourism and Culture on May 19, 2011 (D.R. Poulton & Associates Inc. 2011a, b). The titles of the documents that were contained in this report package are cited in Section 7.0 of this report. The pertinent assessment was carried out under PIF #P316-113-2011 and Licence # P316, issued to Sherri Pearce of D.R. Poulton & Associates Inc. The authors of the report package were Dana Poulton, Nancy VanSas and Sherri Pearce.

The Stage 2 survey of Phase 2 of the proposed development was conducted on May 19 and 25, 2001 and was the subject of a report package that was submitted to the Ministry of Tourism and Culture on May 30, 2011 (D.R. Poulton & Associates Inc. 2011c). The titles of the documents in the report package are also cited in Section 7.0 of this report. The pertinent assessment was carried out under PIF #316-121-2011 and Licence # P316, issued to Sherri Pearce of D.R. Poulton & Associates Inc. The authors of the report package were Dana Poulton, Nancy VanSas and Sherri Pearce.

Information on the previous Stage 1 assessment of the project, the Stage 2-3 assessment of Phase 1 and the Stage 2 survey of Phase 2 of the proposed development as described above has been included in the present report to satisfy the standard in Section 7.5.7.1 of the standards and guidelines (Ministry of Tourism and Culture 2011: 125).

This section of the report also provides the historic context for the Euro-Canadian settlement of the area of the NEXUS Project, as required by Section 7.5.7.1 of the standards and guidelines (Ministry of Tourism and Culture 2011: 125). In the interest of context, brief summaries are

included on the major environmental changes through time, and on the characteristics of settlement and subsistence patterns for the relevant time periods and cultures represented in the history of the area. For reference purposes, a cultural chronology of the region is presented in Table 1.

A cultural synthesis of the study area that contains the proposed NEXUS Project is presented below. In the interest of context, brief summaries are included on the major environmental changes through time, and on the characteristics of settlement and subsistence patterns for the relevant time periods and cultures represented in the history of the area.

The Paleo-Indian Period (9500-7900 B.C.)

The first known human occupation of the province took place ca. 9500 B.C., following the retreat of the Wisconsin glacier. During this period, the environment in southern Ontario was characterized by a cool climate. The vegetation, in transition from spruce to pine dominated forests, would have resembled the modern sub-arctic.

The initial occupation of southern Ontario by Paleo-Indian peoples took place toward the end of a period of high water levels in the Great Lakes, including Lake Algonquin in the Lake Huron Basin and early Lake Erie to the south. That ended when the North Bay outlet opened ca. 8500-8000 B.C., draining Lake Algonquin eastward. The result created Lake Stanley in the Lake Huron Basin, Lake Hough in the Georgian Bay Basin and what were in effect a series of large ponds in the Lake Erie Basin. What are now Pelee Island and Middle Island were hills in the dry west end of the Lake Erie Basin.

Paleo-Indian sites in the Great Lakes region are presumed to relate to a focal adaptation based primarily upon the communal hunting of seasonally migrating herds of woodland caribou. In general, favourite Paleo-Indian site locations include areas adjacent to glacial spillways and kettle lakes, often near present-day swamps on loam soils proximal to muck soils representing the margins of relic pro-glacial or post-glacial lakes. The most diagnostic Paleo-Indian artifacts consist of various types of Early Paleo-Indian fluted projectile points (ca. 9500 - 8500 B.C.) and of projectile points of the Late Paleo-Indian Hi-Lo type (ca. 8300 - 7900 B.C.) and Holcombe type (ca. 8400 B.C.).

The Archaic Period (7900-500 B.C.)

Archaeologists divide the Archaic period into three sequential sub-periods: the Early Archaic (ca. 7900 – 6000 B.C.), the Middle Archaic (ca. 6000 – 2500 B.C.) and the Late Archaic (ca. 2500 – 900 B.C.).

The Archaic period was characterized by gradually warming temperatures and by the northward migration of modern flora and fauna that were established throughout their current range by around 4000 B.C. Water levels continued to rise throughout this period, but in the earlier millennia vast areas in the Lake Erie and Lake Huron basins were dry and habitable. Indeed, research suggests that these lake plains would have represented the richest environment for

prehistoric hunters and gatherers in the entire Lower Great Lakes region, and that they probably contained a wealth of early camp sites and other archaeological resources that were later flooded.

Table 1 Cultural Chronology for Southwestern Ontario

PERIOD	GROUP	TIME RANGE	COMMENT
PALEO-INDIAN	Fluted Point Hi-Lo	9500 - 8500 B.C. 8300 - 7900 B.C.	Big game hunters; small nomadic groups
ARCHAIC			
Early	Side Notched	8050-7750 B.C.	Nomadic hunters and gatherers.
	Nettling	7900-6900 B.C.	
	Bifurcate Base	6800 - 6000 B.C.	
Middle	Laurentian	3500 - 2500 B.C.	Transition to territorial settlements.
Late	Lamoka	2500 - 1800 B.C.	Polished/ground stone tools
	Broad Point	1800 - 1400 B.C.	
	Crawford Knoll	1500 – 500 B.C.	
	Glacial Kame	*ca.* 1000 B.C.	Burial ceremonialism
WOODLAND			
Early	Meadowood Red Ochre	1000 - 400 B.C. 1000 – 500 B.C.	Introduction of pottery
Middle	Saugeen Princess Point	400 B.C. - 500 A.D. 500 – 800 A.D.	Long distance trade networks. Incipient horticulture
Middle: Western Basin	Couture	300 B.C. –500 A.D.	Long distance trade networks
	Rivière au Vase	500-900 A.D.	Incipient horticulture
Late: Iroquoian	Glen Meyer	800 – 1280 A.D.	Transition to village life and agriculture
	Uren	1280 - 1330 A.D.	Large village sites
	Middleport	1330 - 1400 A.D.	Widespread stylistic horizon
	Neutral	1400 - 1650 A.D.	Tribal differentiation and warfare
Late: Western Basin	Yonge Phase	900 – 1300 A.D.	Transition to village life and agriculture
	Springwells Phase	1300 – 1400 A.D.	Large village sites
	Wolf Phase	1400 – 1550 A.D.	Tribal differentiation and warfare
HISTORIC			
Early	Odawa, Ojibwa, Potawatomi	1700 - 1875 A.D.	Social displacement
Late	Odawa, Ojibwa, Potawatomi, Six Nations, Euro-Canadian	1800 A.D. - present	European settlement

The Woodland Period (1000 B.C. – 1650 A.D.)

The Woodland Period, which follows the Archaic in the Lower Great Lakes Region, spans a series of important changes in culture and adaptation. This period is most commonly divided into three chronological sub-periods: Early, Middle and Late. Descriptions follow.

Early Woodland (ca. 900 to 400 B.C.)

The Woodland Period is marked by the introduction into Ontario of pottery, the earliest of which dates to the Early Woodland sub-period. Beyond this, there appear to have been no substantial changes in the hunting, fishing and gathering settlement and subsistence patterns followed during the Late Archaic. Burial ceremonialism, however, suggests an increased social or territorial identity with a particular resource area such as a drainage system. Mortuary ceremonialism is characteristic of the Early Woodland and, as expressed by the inclusion of elaborate grave goods in burials, represents the fluorescence of a pattern recorded for the slightly earlier Glacial Kame Culture of the Terminal Archaic.

Middle Woodland (ca. 300 B.C. to 500 A.D.)

The Couture Complex, which occupied this region during the Middle Woodland period, is the poorest known of the Middle Woodland cultural complexes of southern Ontario. This complex occupied the area drained by rivers flowing into Lake St. Clair and the northwest shore of Lake Erie.

The Couture Complex subsistence included the hunting of deer as well as the gathering of black walnut, hickory and acorn. There are some indications that mortuary practices of this complex included the use of burial mounds, and burial mounds have certainly been recorded on Pelee Island and on the mainland north of Point Pelee. Another characteristic of this time period is the presence of large caches of exotic artifacts that provide evidence of long distance contacts with peoples of the Hopewellian Interaction Sphere. One example from the Bothwell Sand Plain of Kent County is a cache of over 200 bifaces of Flint Ridge Chalcedony; the source for that material is in central Ohio.

Late Woodland (ca. A.D. 800-1650)

The Late Woodland sub-period in the Western Basin Tradition has been divided into four sequential phases: the Rivière au Vase Phase (ca. 500-900 A.D.); the Younge Phase (ca. 900-1300 A.D.); the Springwells Phase (ca. 1300-1400 A.D.); and the Wolf Phase (ca. 1400-1550 A.D.).

The Rivière au Vase Phase is best known from sites on Point Pelee. Sites of this phase include small camps as well as longer term occupations by larger populations exploiting the rich marsh and lakeshore environment. These sites were occupied during the warm seasons. It is believed that in the winter the population dispersed into a number of small groups to hunt elsewhere within their territory.

Our knowledge of the Rivière au Vase Phase is limited, as sites of that phase are generally rare. In contrast, the succeeding Younge Phase is represented by numerous well documented sites. Subsistence during that phase represented a continuation of the Rivière au Vase Phase, with a seasonal round that included the exploitation of seasonally abundant resources. Corn was grown by Younge Phase peoples, but it only occurs in small quantities on sites of this phase and it is evident that it only represented a supplementary food source. That is in sharp contrast to contemporary Iroquoian sites, where cultigens represented an ever increasingly important part of the diet. It has been hypothesized that the larger number of Younge Phase sites reflects an increase in population during the period ca. 900-1300 A.D; it has further been hypothesized that the people of this region expanded into previously uninhabited areas during this period (Murphy and Ferris 1990:262). The Younge Phase settlements included villages on the Thames River east of Thamesville.

Settlement and subsistence during the succeeding Springwells Phase represented a continuation of earlier patterns, but with an increased emphasis on warm season village sites located in areas with a diversity of natural resources. That pattern evidently reflects an increased reliance of agriculture to supplement the diet of Springwells Phase peoples. Winter camps occur on the Thames River during this period, but not village sites. At the same time, Springwells Phase peoples expanded into the Dover Plain on the east side of Lake St. Clair. These moves may have been in response to a westward expansion of contemporary Iroquoian peoples into the Western Basin Tradition territory of the Bothwell Sand Plain during the 13th century.

The transition between the Springwells and Wolf Phases and the Wolf Phase itself are both marked by the use of village sites surrounded by protective earthworks. Contemporary villages of the prehistoric Neutral Iroquoians are also protected by earthworks with palisades, providing evidence of continued warfare and tension between the Iroquoians and Western Basin peoples of southwestern Ontario.

Although the study area fell within the limits of the Western Basin Tradition throughout most of the Late Woodland period, it was in reality part of the frontier that separated Western Basin peoples in extreme southwestern Ontario from the contemporary Iroquoian peoples of the Neutral tribal confederacy in the central and eastern parts of southwestern Ontario. In the late 15th century, during the Wolf Phase of the Western Basin Tradition, there was a westward expansion of Neutral (or Attawandaron) peoples into the Bothwell sand plain and a small number of Iroquoian villages were established in what is now Kent County, as far west as Chatham.

This westward expansion reflects warfare between the Iroquoian Neutral peoples and their Algonquian-speaking Western Basin contemporaries. It was a conflict that extended back into the 15th century and that eventually led to the withdrawal of the Neutral to east of the Grand River by the late 16th century. By the time of the European fur trade in the first half of the 17th century, the conflict between the Neutral and the Algonquian Fire Nation who lived around the west end of Lake Erie was still ongoing.

The Neutral and the other Ontario Iroquoian tribal confederacies all met the same fate in the mid 17th century: first devastated in the 1630s by a series of plagues accidentally introduced by the Europeans; and finally dispersed and driven from their homelands by raids from the Iroquois of New York State in 1649-1651 A.D.

Each of the Iroquoian villages in the Bothwell sand plain had a population of up to several hundred individuals and was protected by earthworks. The Iroquoian way of life was largely based on a subsistence pattern that involved the cultivation of corn, beans and squash, supplemented by hunting, fishing and the gathering of wild plant foods. Iroquoian villages were typically occupied year-round for some 12-20 years. They moved when the local supply of firewood had been exhausted and the soils in the surrounding agricultural fields were no longer fertile. Villages may cover from one to several hectares in size and included numerous dwellings known as longhouses. In addition to villages, satellite settlements consisting of smaller, more temporary habitations such as agricultural cabin sites and fishing and hunting camps may occur in the area surrounding the village.

The Historic Period (A.D. 1650 to Present)

The history of the First Nations peoples during the second half of the 17th century and the succeeding 18th century was one of wide-scale cultural displacement. The displacement of the Iroquoians from southern Ontario in 1649-51 and the Algonquin people from adjacent Michigan and Ohio resulted in a re-organization of the cultural landscape of southern Ontario towards the end of the 17th century. It was during this period that the Ojibwa established themselves in the region. The available natural resources also made the area attractive for hunting, fishing and foraging for plant foods. Maple sugar was also an important product during this period.

At the time of the fall of New France in 1759, this region was occupied by the Ojibwa. The loss of the Thirteen Colonies in the American Revolution provided the British Crown with an incentive to expand settlement into what became Upper Canada in the 1790s. To that end, the Crown negotiated a series of treaties with the resident First Nations peoples.

Figure 3 of the Stage 1 report of November 22, 2010 illustrates the location of the study area relative to a composite of the 1880 Historic Atlas maps of Sarnia Township and Moore Township (Phelps 1973). Although there was some Euro-Canadian settlement in the vicinity of the NEXUS Project prior to the negotiation of treaties with the First Nations, concerted Euro-Canadian settlement in this part of Lambton County did not begin until after 1825, when the British negotiated a major land treaty with the Chippewa who lived in southwestern Ontario. As a result of that treaty, 2,200,000 acres were surrendered to the British Crown. The area surrendered included the study area for the NEXUS Project as well as almost all of the rest of the northern part of Lambton County. It also included all of Perth County and parts of Waterloo, Wellington and Oxford Counties. This treaty was confirmed in a detailed survey of 1827, which also created four Native reserves, all of which were situated within Lambton County.

One of the reserves was the Sarnia (or St. Clair) Indian Reserve #45, which is located just north of the study area. This reserve was established by the Treaty of July 10, 1827. As stated in the Historic Atlas, it originally contained 10,280 acres, but through numerous surrenders to accommodate the southward industrial and residential expansion of Sarnia it had been reduced in size to 4,130 acres by 1973 (Phelps 1973:63). The original reserve fronted on the St. Clair River; the lands fronting on the river were among those that were eventually surrendered.

The Sarnia Reserve and the other reserves in Lambton County were initially occupied by solely by Chippewa; over time their populations were augmented by Pottawatamies, Ottawa and Shawnees. The townships that were also established by the 1827 survey were named in 1829. Moore Township, which contains the lands that are involved in the NEXUS Project, was named in honour of Sir John Moore. He was a British officer who was killed at the Battle of Corunna in 1809, during the Peninsular War.

The study area for the NEXUS Project is located well north of the Detroit Frontier. Although what is now the Canadian side of the Detroit River was settled by the French in 1750, the Euro-Canadian settlement of the St. Clair River did not occur until some decades later. In the decades that preceded and followed the War of 1812 several French and British settlers established homesteads along the east bank of the St. Clair River in what is now Moore Geographic Township, renting land from the local Native population. They included John Courtney who settled on what is now Lot 39 north of Mooretown in 1804. He was the first English-speaking settler in all of Lambton County.

The earliest white settlers in Sarnia Township were a French-Canadian family by the name of La Forge. According to the Historic Atlas (Phelps 1973:8), they may have arrived as early as 1800, long before the village of Sarnia came into being. Following the establishment of the Sarnia Reserve in 1827 an Indian agent, a clergyman and a school teacher lived on the Reserve. In the 1820s these individuals and the La Forge family were the only non-Natives living in what was to become the City of Sarnia.

Several of the early Euro-Canadian pioneers in this area were squatters who settled in the expectation of later getting settlement rights. One of the plans that date to this period is of Moore Township. A copy of it is on file at Lambton Room. This plan is entitled "MOORE" and bears the legend "Surveyed by Order from the Surveyor bearing date at York, the 8th of April 1829. Director Surveyors Office, Caradoc, 26th January 1830." On the left-hand side of the plan it states "List of squatters and the probably amount of their respective improvements," followed by their names and the respective acreages.

Around this time in Upper Canada (now Ontario), the clearance of the land for cultivation and the construction of a residence were not simply matters of survival, they were also obligations imposed by the British Government on early settlers. A condition of receiving a Crown Patent for a property was that new settlers had to build a house measuring 16 by 20 feet. They also had an obligation to clear the trees within 100 feet of the road on which their property fronted and along the proposed alignment of the road itself. In that manner, the government was able to promote the spread of settlement and agriculture and the clearance of the road rights-of-way that were crucial to trade and transportation. In the case of the 1829/1830 plan of Moore Township, all of the areas that are mapped as having been cleared of forest fronted on roads. They made up a tiny fraction of the landscape, and all of them were rectangular in shape and were situated like postage stamps, strung out along the portions of the lots that fronted on the roads.

In the early 1830s the publication of a book by Dr. Tiger Dunlop of the Canada Company resulted in a wave of settlement in Sarnia Township by retired officers of the British army and navy. The first of these to arrive in the township was a ex-lieutenant of the British Royal Navy named Vidal; in 1832 he settled a 200-acre parcel in what by 1880 had become downtown Sarnia. Initially, the settlement was known as The Rapids; in 1836 it was renamed Port Sarnia.

Soon after Vidal arrived in 1832 he opened a tavern on his property; it was the first tavern on the St. Clair Frontier. By 1835 Sarnia had a wharf, two stores and two inns, a frame house, several log houses and several log shanties. One of the commercial establishments was a two-storey log inn. It had a sign which read "INN" and came to be known as the "double N-I" as the person who put up the sign was illiterate and had nailed it to the building upside down (Phelps 1973:9). Growth in Sarnia proceeded slowly in the first few decades, but by 1853 the town had a population of 800.

Agricultural settlement had been established through the present study area by the third quarter of the 19th century. The area that contains the proposed Dow Moore, Corunna and Seckerton Pipeline Project was rural as of the third quarter of the 19th century. With the exception of petro-chemical facilities and underground natural gas storage wells, pools and transmission lines, much of the study area remains rural to this day.

Reference to the 1880 Historic Atlas township maps shows that the study area was not located in close proximity to any 19th century communities. The closest community to the study area by the third quarter of the 19th century was Corunna. Located on the St. Clair River, the east edge of the community was situated 3.5 kilometres west of the study area as of 1880.

The genesis of Corunna dates back to 1823 when Viscount Beresford, a veteran of the Napoleonic War, selected it as the proposed site for the joint capital of Upper and Lower Canada (Elford 1982:61). Beresford named it for the 1809 Battle of Corunna, in which he had fought. The plans for the joint capital were soon scrapped. A town site was laid out at Corunna in 1836 but as late as the mid 1840s there were few settlers. John C. Geike, who lived in nearby Mooretown from 1841 to 1849, wrote a description of early Corunna in his book "*Life in the Woods*". He noted that Corunna stood on the west side of a swampy belt, and that a man had excavated a broad ditch from the swamp to the river to provide water power for his mill. Over time the swamp dried up and became good land (Elford 1982:61). It was not until the 1850s and 1860s that Corunna really developed as a community of any size. By 1869 it had a population of 200.

It should be noted that the township maps in the 1880 Historic Atlas only illustrate the locations of the homes of subscribers. In consequence, they are potentially misleading as a visual indicator of the extent of rural settlement in the third quarter of the 19th century. With that proviso, the 1880 Historic Atlas map of Moore Township map depicts four farmsteads within the limits of the study area defined by Stantec for the proposed Dow Moore, Corunna and Seckerton Pipeline Project. One was the Peter Gallogley farmstead in the north end of Lot 22, Concession 10. A second and third are W. J. Courtney and Jas. Cruikshank farmsteads in the north end of Lot 20, Concession 8. Jno Robinson is also identified as having a farm in Lot 22, Concession 8 and Henry McGurk is identified as having a farm in the south half of Lot 22, Concession 9. However, no farmstead is depicted for the Robinson property and the farmstead for the McGurk property was located in Lot 23, outside of the present study area.

The 1880 Historic Atlas map of Moore Township also shows three institutional buildings within the study area for the proposed pipelines. Two are schools: one located in the northeast corner of Lot 21, Concession 10; the other in the southwest corner of Lot 21, Concession 9. The third institutional building is a Templars Hall. It was located in the northeast corner of Lot 19,

Concession 8 and was one of two Templars halls in this area to service the local population of Freemasons. The Templars Halls were meeting places for members of the International Order of Good Templars. It was a fraternal temperance organization that was founded in the mid 19th century.

By the second half of the 19th century other commercial and institutional buildings were located in Corunna, to the west of the study area, but they are not depicted on the 1880 Historic Atlas map of Moore Township. By the 1860s they included four churches, five carpenters' shops, three general stores, three shoemakers, two blacksmith shops, two tailors, two taverns, a brewery and a grist mill and saw mill (Elford 1982:61-64). Still other businesses were added to the community in the 1870s.

1.3 Archaeological Context

This section of the report consists of several distinct elements as defined in Section 7.5.8 of the standards and guidelines (Ministry of Tourism and Culture (2011: 125-126). They are described below.

Known and Registered Archaeological Sites

The 2010 background study determined that no archaeological sites had been documented within a one-kilometre radius of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. The subsequent Stage 2 survey that was initiated in May 2011 resulted in the discovery of a late 19th century Euro-Canadian refuse deposit. It has been designated the Alexander site. A Stage 3 controlled surface collection and partial test excavations of the site were carried out at the site at intervals during the first two weeks of May 2011. The fieldwork was conducted by Sherri Pearce and Nancy VanSas of D.R. Poulton & Associates Inc. under PIF #316-113-2011. The test excavations of this site were completed on June 10, 2011. This site was not registered as it shows no value or interest whatsoever as a heritage resource. A report and supplemental documentation on the Stage 3 test excavations of the Alexander site will be completed within the next few weeks.

Conditions in the Subject Lands

As stated previously, the NEXUS Project is a proposed natural gas development that is located in Moore and Sombra Geographic Township, Lambton County, Ontario. There are several different elements to the overall NEXUS project. They include the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It is situated in St. Clair Township and will involve removing existing natural gas pipelines and replacing them with new and thicker pipelines. It will also involve improvements to the existing natural gas wells in order to increase their storage capacity.

Other elements of the NEXUS Project will be situated to the south of the study area for the proposed Dow Moore, Corunna and Seckerton Pipeline Project. They include the proposed Mid and South Kimball Utility Meter Site east of 3595 Tecumseh Road, across the road from the existing Corunna Compressor Station. They also include the proposed Ladysmith Utility Meter

Site at 1059 Courtright Line, above the Ladysmith Pool off of Courtright Line and west of Tecumseh Road. In addition, other elements of the greater NEXUS Project include the proposed Coveny Utility Meter Site on the EGS property at the southwest corner of Kimball Road and Bentpath Line. The latter will include a new pipeline that will extend east and south from the new meter station to the existing well that is designated Tcov2.

All of the above proposed facilities, including the proposed Dow Moore, Corunna and Seckerton Pipeline Project, are scheduled to be constructed in the late spring and early summer of 2011. One other element of the NEXUS Project will be constructed in 2012. It is the proposed Wilkesport Utility Meter Site. It will be situated on the east side of Baby Road south of White Line, east of the village of Wilkesport. This element of the overall project will also require a new pipeline that will extend from the new meter station station to the existing well that is designated TW2. In addition, it will include a new communications antenna.

The construction of the existing Corunna Gathering Line and Seckerton Gathering Line and associated wells was completed in 1964 and the construction of the existing Dow-Moore Line and associated wells was completed in 1984. No archaeological assessments were done in advance of the construction of those facilities.

The focus of the present report is Phase 3 of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. For purposes of the Environmental and Socio-Economic Assessment, Stantec Consulting Ltd. defined a study area surrounding the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It is located in the area west of Tecumseh Road, south of Petrolia Line, and contained within the area approximately 600 m south of Rokeby Line and 500 m west of Ladysmith Road. The properties screened to locate existing environmental features are located in Lambton County. They involve parts of Lots 19-22 inclusive of Concessions 8, 9 and 10 of Moore Geographic Township.

The topographic map presented as Figure 1 of this report show the location and limits of the study area that was defined by Stantec for purposes of the Environmental and Socio-Economic Assessment Study of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. As illustrated in Figure 1, the study area is situated 3 km east of the village of Corunna and 2.75 km south of the City of Sarnia.

As illustrated in Figures 1, 2 and 3, an east-west oriented woodlot complex is located within the study area; it straddles the line between Concession 9 and Concession 10. Existing natural gas storage wells are located in clearings within the central portion of the woodlot and in the agricultural fields that flank it to the north and south. Two additional wells are located in the south-central portion of the study area, south of Rokeby Road. There are some 36 active natural gas wells in the storage pool. There is also one plugged back and whipstocked well.

The proposed Dow Moore, Corunna and Seckerton Pipeline Project comprises three pipelines with two small tie-in sections. One pipeline, designated the Seckerton Gathering Line, involves the reconstruction of a gathering pipeline, approximately 1,500 m long and 508 mm (20 inch) in diameter, within the Seckerton pool.

The second proposed pipeline, designated the Interconnect Pipeline, includes the construction of approximately 1,900 m of 20 inch (50.8 cm) diameter steel pipeline to connect the existing Dow

Moore Gathering line to the gathering lines for the Corunna and Seckerton natural gas storage pools. This interconnecting pipeline will also have two small (approximately 50 m) sections, one 508 mm and the other 406 mm (16 inch).

The third project, designated the Corunna Gathering Line, includes the construction of approximately 1,000 m of 20 inch (50.8 cm) diameter steel pipeline to connect the proposed Interconnect Pipeline to the proposed discharge point located within the southwest corner of the intersection of Petrolia Line and the Enbridge gravel access road. The proposed pipeline also includes three meter stations, each measuring approximately 65 m by 45 m in length and width.

The Interconnect Pipeline (previously referred to as Potential Route 1A) extends from the Dow Moore Tie-In on the east side of Ladysmith Road east and north to the Corunna Tie-In. As illustrated in Figures 2 and 3, the alignment for the Interconnect Gathering Line extends from the Dow Moore Tie-In eastward a distance of approximately 500 metres parallel to the south edge of the woodlot. The eastern part of this segment also follows the east-west segment of an existing Enbridge Gas gravel access road that originates on Rokeby Line. In addition, the remainder of the alignment of the Interconnect Pipeline also parallels existing Enbridge Gas gravel access roads. At a point where the main access road bends north the alignment of the Interconnect Pipeline also turns north, following the alignment of the existing Seckerton Gathering Line and the access road to the north edge of the woodlot. From that point it extends eastward, with a northward jog, paralleling the edge of the woodlot on the north and west sides of the existing roadway. It then bends north, following the access road and the boundary between two agricultural fields on the west side of the existing roadway, before turning eastward on the north side of the existing roadway. As stated above, it terminates at the Corunna Tie-In, at a point adjacent to the existing Corunna Gathering Line.

In addition to constructing the Interconnect Pipeline, the Dow Moore, Corunna and Seckerton Pipeline Project will replace existing pipelines, including the Seckerton Gathering Line and the Corunna Gathering Line.

The replacement segment of the Seckerton Gathering Line (previously referred to as Proposed Route 2) extends in a northwesterly direction from a point in an agricultural field approximately 170 metres south of Rokeby Line. The alignment crosses Rokeby Line, then bends in a north-northwesterly direction, extending across country through agricultural fields and then through the woodlot. The segment through the woodlot travels through the east edge of the woodlot along the existing Enbridge gravel access road. It then travels under the gravel access lane that originates on Rokeby Line to the west edge of the woodlot along a route that follows the west edge of the woodlot. The Seckerton Gathering Line terminates at the point where the access road intersects the north edge of the woodlot.

The replacement segment of the existing Corunna Gathering Line extends in a northwesterly direction from the location of the Corunna Tie-In and termination location of the Interconnect Pipeline through agricultural fields to its termination immediately south of Petrolia Line. The pipeline makes a slight turn from a northwesterly to a northerly direction. The pipeline then turns 45 degrees east toward Petrolia Line. It terminates at the proposed discharge point located in the southwest corner of the intersection of Petrolia Line and Enbridge gravel access road.

Two other small areas required archaeological assessment as part of the proposed Dow Moore, Corunna and Seckerton Pipeline Project and the greater NEXUS Project. Both are small and both are situated south of Petrolia Line, at or near the northern terminus of the Corunna Gathering Line. They are described below.

The initial task for the development was to strip the ploughzone from a rectangular-shaped area in order to lay down a granular base and construct a parking lot and compound for construction trailers. The proposed parking lot and compound will cover the area from Petrolia Line south to the existing natural gas storage well that is designated TC6 and the related access road that leads to it from the west. The lands that are involved in proposed parking lot and compound have a surface area of 1.36 hectares. They currently form part of an agricultural field that was ploughed and disced in the fall of 2010.

The second area that is a priority for the development was a rectangular-shaped area that is located immediately south of the proposed parking lot and construction compound. It has a surface area of 1.62 hectares and also currently forms part of an agricultural field that was ploughed and disced in the fall of 2010. This area is required for the storage of the segments of buried pipeline that will be removed from the existing Seckerton Gathering Line and the Corunna Gathering Line as part of the proposed Dow Moore, Corunna and Seckerton Pipeline Project and the greater NEXUS Project.

It should be noted that the parking lot and pipe laydown areas that are described in the above two paragraphs represent temporary land uses. The lands in question will be stripped of topsoil as part of this project, but the soils will be replaced as part of the final clean-up.

The topography in the study area is flat. The closest stream course is Baby Creek. It is a tributary of the St. Clair River and is situated 2.5 kilometres west of the study area. The St. Clair River itself is situated 4.5 kilometres west of the study area. The study area for the proposed Dow Moore, Corunna and Seckerton Pipeline Project forms part of the St. Clair Clay Plains physiographic region (Chapman and Putnam 1984: 147). As described by Chapman and Putnam, it covers a surface area of 2,270 square miles, was flooded by glacial Lakes Whittlesey and Warren and is characterized by little relief.

Dates of the 2011 Archaeological Fieldwork

The Stage 2 archaeological fieldwork that forms the subject of this report was conducted on Friday June 10, 2011. This information is being included herein to satisfy Section 7.5.8.3 of the standards and guidelines (Ministry of Tourism and Culture (2011: 125).

Previous Archaeological Fieldwork

The fieldwork and reporting on the overall NEXUS project is being done in a series of phases. The information that is presented below on the previous fieldwork is being included herein in order to satisfy Sections 7.5.8.4 and 7.5.8.5 of the standards and guidelines (Ministry of Tourism and Culture (2011: 126).

In the spring of 2011 Stantec contracted D.R. Poulton & Associates Inc. to carry out an expanded Stage 1 archaeological background study of the balance of the proposed facilities that will be involved in the overall NEXUS project as well as the Stage 2 archaeological survey of the proposed facilities. The survey was initiated during the first week of May 2011. It primarily focused on the lands that will be subject to impact from the Phase 1 construction. They are located in the northwest quadrant of Lot 16, Concession 10, Moore Geographic Township and have a surface area of 2.98 hectares. The survey of those lands resulted in the discovery of a late 19th century Euro-Canadian refuse deposit. It has been designated the Alexander site. A Stage 3 controlled surface collection and partial test excavations of the site were carried out at the site at intervals during the first two weeks of May 2011. The fieldwork was conducted by Sherri Pearce and Nancy VanSas of D.R. Poulton & Associates Inc. under PIF #316-113-2011.

Further to the above, Stage 2 survey was conducted on May 2 and 4, 2011. A Stage 3 controlled surface collection of the Alexander site was conducted on May 4. Finally, the partial Stage 3 test excavations of the Alexander site were carried out on May 12, May 13 and May 16, 2011.

The reporting on the survey that was conducted during the first half of May 2011 and on the partial Stage 3 test excavations of the Alexander site was submitted to the Ministry of Tourism and Culture on May 19, 2011. The authors of the report were Dana Poulton, Nancy VanSas and Sherri Pearce. The pertinent report package included the requisite covering letter. In addition, it included the basic assessment report (D.R. Poulton & Associates Inc. 2011a), which has since been added to the Provincial registry of archaeological reports. Finally, it included the requisite supplementary documentation of the Alexander site (D.R. Poulton & Associates Inc. 2011b).

As an interim measure, and pending the completion of the Stage 3 test excavations, a 10-metre wide protective buffer surrounding the Alexander site was defined and fenced. The Stage 3 test excavations of this site were completed on June 10, 2011. A report and supplementary documentation on the Stage 3 assessment of the Alexander site will be completed within the next few weeks. The May 19 report included a request for partial clearance of the first phase of the proposed development, with the exception of the protective buffer surrounding the Alexander site. The letter of partial clearance for the first phase of the proposed development was issued by Shari Prowse of the Ministry on the same day that the report and the supplementary documentation were submitted.

On May 19 and 25, 2011 a Stage 2 survey was carried out on additional proposed facilities that form part of the proposed Dow Moore, Corunna, and Seckerton Pipeline Project and the greater NEXUS Project. It primarily covered the proposed facilities that involved in Phase 2 of the proposed construction of the Dow Moore, Corunna, and Seckerton Pipeline Project. They are all located south of the woodlot, in Lots 19-22 of Concessions 8 and 9 of St. Clair Township, Moore Geographic Township. The Stage 2 fieldwork that was conducted on May 19, 2011 also included the parallel segments of the proposed Seckerton Pipeline and the adjacent proposed Interconnect Pipeline that extend from the south edge of the woodlot north to the east-west oriented service road. The fieldwork was conducted by Sherri Pearce and Nancy VanSas of D.R. Poulton & Associates Inc. under PIF #316-121-2011.

The reporting on the survey that was conducted on May 19 and 25, 2011 was submitted to the Ministry of Tourism and Culture on May 30, 2011. The authors of the report were Dana Poulton, Nancy VanSas and Sherri Pearce. The pertinent report package included the requisite covering

letter. In addition, it included the basic assessment report (D.R. Poulton & Associates Inc. 2011c), which has since been accepted by the Ministry into the Ontario Public Register of Archaeological Reports.

Relevance of Previous Archaeological Fieldwork

As stated previously, the fieldwork and reporting on the overall NEXUS Project is being done in a series of phases. As such, the previous fieldwork is directly relevant to the fieldwork that is being described in this report, as both form part of a greater whole. This statement of the relevance of the previous fieldwork is being included herein in order to satisfy Section 7.5.8.6 of the standards and guidelines (Ministry of Tourism and Culture (2011: 126).

The fieldwork that is documented in this report was essentially identical in nature to that which was covered by the May 30 report on the Phase 2 fieldwork (D.R. Poulton & Associates Inc. 2011c). It differed from the fieldwork that was covered by the report and the supplementary of May 19, 2011 on the Phase 1 fieldwork (D.R. Poulton & Associates Inc. 2011a, b) in that that fieldwork included a partial Stage 3 level of assessment of the one site that was discovered by the 2011 assessment of the NEXUS Project: the Alexander site. This information is being included herein in order to satisfy the standards that are required by Sections 7.5.8.5b and 7.5.8.5b of the standards and guidelines (Ministry of Tourism and Culture (2011: 126).

2.0 FIELD METHODS

The fieldwork that was documented in the May 19, 2011 report by D.R. Poulton & Associates Inc. (2011a) included the proposed Phase 1 facilities as well as some of the proposed Phase 3 facilities. On June 10, 2011 a Stage 2 survey was carried out the two proposed pipeline corridors that form the balance of Phase 3 of the proposed Dow Moore, Corunna, and Seckerton Pipeline Project and the greater NEXUS Project. The corridors in question are located north of the woodlot that straddles the boundary between Concessions 9 and 10 of Moore Geographic Township. More specifically, the lands surveyed on June 10, 2011 form part of Lot 20, Concessions 10 of St. Clair Township, Moore Geographic Township. This report documents the rationale, methods and results of the June 10, 2011 archaeological survey.

The standard that is set out in Section 7.8.2.1.2 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 138) requires that archaeological assessment reports include an inventory of the documentary record that was generated by the fieldwork. The documentary record that has been generated by the fieldwork documented in this report includes hand-made notations on printouts of digital aerial photographs and on plans of the proposed development. It also includes field notes. Finally, it includes digital photographs of the fieldwork.

Figure 3 illustrates the various elements that are involved in the proposed construction of the proposed Dow Moore, Corunna and Seckerton Pipeline Project. It also illustrates the extent and techniques of the Stage 2 archaeological assessment that is documented in this report, as well as the lands that were covered by the archaeological surveys that were documented in previous reports.

One of the Phase 3 elements is the continuation of the Interconnect Pipeline eastward toward the juncture with the Corunna Tie. The other Phase 3 element is the northward extension of the Corunna Gathering Line. Previous Stage 2 pedestrian and shovel test pit surveys of the southern and western sections of the Interconnect Pipeline were documented in the reports of May 19 and May 30 by D. R. Poulton & Associates Inc. (2011a, 2011c).

The elements of the proposed Phase 3 construction that were surveyed on June 1l, 2011 are all located in arable lands. They transected fields that had been planted in winter wheat. In order to facilitate the pedestrian survey of the corridors, the proponent arranged to have them cultivated in advance of the survey. The corridors were cultivated on June 2 and June 3, 2011. Several light rainfalls followed in the succeeding days.

The Stage 2 pedestrian survey of the Phase 3 portion that is described above was conducted by pedestrian survey at a five-metre interval. This technique consisted of walking back and forth checking the ground surface for cultural remains. The construction and working easements of the alignments had a combined width of 20 metres but for insurance purposes the width that was cultivated and surveyed was 25 metres.

The survey that is documented in this report was carried out by a crew of two under the direction of Nancy VanSas. The weather was overcast and cool at the time. Lighting conditions for the

observation of cultural remains were excellent and conditions for the observation of cultural remains were good.

Figure 2 shows the location of the points from which the three photographic plates that are illustrated in this report were taken . Plates 1-3 illustrate the conditions at the time of the June 10, 2011 survey. Plate 1 is a view of the survey of the Corunna Gathering Line looking south toward the woodlot. Plate 2 is a view of part of the eastern alignment of the Interconnect Pipeline looking west. Finally, Plate 3 is a close-up of the conditions for the observation of cultural remains at the time of the June 10, 2011 survey.

3.0 RECORDS OF FINDS

Section 7.8.2 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 138), the Record of Finds section of the document, requires that Stage 2 assessment reports provide specific types of information on all archaeological discoveries. In the present case, the June 10, 2011 survey did not result in the discovery of any archaeological remains. In consequence, the requirements of Section 7.8.2 of the standards and guidelines do not apply to this report.

4.0 ANALYSIS AND CONCLUSIONS

The standard that is specified in Section 7.8.3.1 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 138) requires that the Analysis and Conclusions section of reports on Stage 2 fieldwork addresses the following statement: "Summarize all findings from the Stage 2 survey, or state that no archaeological sites were identified." The information that is presented below is intended to satisfy the standard that is specified in Section 7.8.3.1 of the 2011 standards and guidelines.

As stated in Section 3.0 of this report, the survey that was carried out on June 10, 2011 covered the balance of the lands that will be impacted by the Phase 3 construction. It also included buffers for the arable sections of the alignments of Corunna Gathering Line and the proposed Interconnect Pipeline that are located north of the woodlot. No archaeological remains whatsoever were discovered during the Stage 2 pedestrian survey of the proposed Phase 3 facilities.

Further to the above, the standard that is articulated in Section 7.8.3.2b of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 139) requires that this section of the report include a comparison against the criteria in Stage 2 *Property Assessment* to determine whether further assessment is required. Those elements of the standard are addressed below.

The standard that is specified in Section 7.8.1.2a of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137) requires that this section of the Stage 2 report provide detailed and explicit descriptions of how each standard was addressed for property survey generally. The standard that is articulated in Section 2.1.1 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 28) requires that the entire property be included in the survey. The survey of the proposed facilities that are involved in Phase 3 of the proposed construction of the Dow Moore, Corunna and Seckerton Pipeline Project included 100% of the lands that will be subject to impact from the proposed construction together with an additional buffer. Accordingly, the survey satisfies this standard.

The standard that is articulated in Section 2.1.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 29) requires that the property be surveyed when weather and lighting conditions permit good visibility of land features. The weather and lighting conditions that pertained during the June 10, 2011 survey that is described in this report satisfied this standard.

The standard that is articulated in Section 2.1.5 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 29) requires that assessment reports map all field activities (e.g. extent and location of field methods, survey intervals) in reference to fixed landmarks, survey stakes and development markers. The standard also requires that mapping must be accurate to 5 m or to the best scale available. The mapping in this report satisfies this standard.

The standard that is articulated in Section 2.1.6 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) requires that surveyors photo-document examples of all field conditions encountered (e.g. ploughed field, pasture or woodlot, disturbances). The photographs that are included in this report satisfy this standard.

The standard that is articulated in Section 2.1.1.1 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) requires that cultivated agricultural lands must be subject to pedestrian survey. The standard that is articulated in Section 2.1.1.2 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) also requires that lands to be surveyed must be recently ploughed and that the use of chisel ploughs is not acceptable. The standard that is articulated in Section 2.1.1.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) also requires that lands to be assessed by pedestrian survey must be weathered by one heavy rainfall or several light rains to improve visibility of archaeological resources. In addition, the standard that is articulated in Section 2.1.1.4 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) requires that direction be given to the individuals farming the property to ensure that it be ploughed deep enough to provide total exposure but not deeper than previous ploughing. In addition, the standard that is articulated in Section 2.1.1.5 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) requires that lands to be assessed by pedestrian survey have at least 80% ground visibility. Finally, the standard that is articulated in Section 2.1.1.6 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 30) requires that survey transects should be spaced at a 5 m interval. In the present case, the June 10 survey satisfied all of the above standards.

The standard that is specified in Section 7.8.1.2a of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137) requires that this section of the Stage 2 report provide detailed and explicit descriptions of how each standard was addressed for pedestrian survey and for test pit survey. The standard that is specified in Section 7.8.1.2b of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137) requires that this section of the Stage report provide detailed and explicit descriptions of how each standard was addressed for pedestrian survey and test pit survey. The information required for these two standards is provided in the above paragraph.

The standard that is specified in Section 7.8.1.2c of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137) requires that this section of the Stage 2 report provide detailed and explicit descriptions to address any differences in approach for areas possessing different conditions. In the case of the assessment described in this report, there were none, so that is not an issue for the present assessment.

The standard that is specified in Section 7.8.1.2d of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 137) requires that this section of the Stage 2 report provide detailed and explicit descriptions of how each standard was addressed where alternative methods acceptable through guidelines or special conditions were used. In the case of the assessment described in this report, no alternative assessment methods were used, so that is not an issue for the present assessment.

5.0 RECOMMENDATIONS

As stated in the report on the 2010 background study (D.R. Poulton & Associates Inc. 2010: 12), the results of the Stage 1 assessment determined that the lands that are involved in the Dow Moore, Corunna and Seckerton Pipeline Project had a moderate potential for as-yet undiscovered Native and Euro-Canadian archaeological remains. In order to address this potential, The Stage 1 report recommended that a Stage 2 survey be carried out (D.R. Poulton & Associates Inc. 2010: 13).

The Stage 2 survey was initiated in the spring of 2011. As previously stated, the survey and the related reporting have been conducted in a series of phases to address priorities for the scheduling of the proposed construction. This report primarily addresses concerns for Phase 3 of the proposed construction, which consists of part of the Interconnect Pipeline and the Corunna Gathering Line that are located north of the woodlot, in Lot 20 of Concession 10 of St. Clair Township, Moore Geographic Township, Lambton County.

As detailed in Section 3.0 of this report, no archaeological remains whatsoever were discovered during the Stage 2 pedestrian survey of the proposed facilities that are involved in Phase 3 of the proposed construction of the Dow Moore, Corunna and Seckerton Pipeline Project.

Under the *Ontario Heritage Act* (1990a), it is a requirement of archaeological consulting licences that consultants prepare and submit assessment reports to the Ontario Ministry of Tourism and Culture. Archaeological Review Officers of the Ministry then review each report to ensure that the assessment and the report satisfy consulting licence requirements under the Act and other pertinent legislation, and that they conform to current archaeological standards and guidelines. If the report and the assessment do so conform, the pertinent Archaeological Review Officer then issues a letter confirming that and accepting the report into the Ontario Public Register of Archaeological Reports that is provided for in Section 65.1 of the *Ontario Heritage Act.*

In the present case, it is recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Ontario Public Register of Archaeological Reports. It is also recommended that the letter include a statement of concurrence with the findings of the Stage 2 archaeological fieldwork that is documented in this report.

Further to the above, Section 7.8.4.3 of the standards and guidelines formulated by the Ministry of Tourism and Culture (2011: 139) state the following with respect to the reporting on archaeological surveys that did not result in the discovery of archaeological sites that warranted further concern: “If the Stage 2 survey did not identify any archaeological sites requiring further assessment or mitigation of impacts, recommend that no further archaeological assessment of the property be required.” That was the case for the proposed facilities that are involved in Phase 3 of the proposed construction of the Dow Moore, Corunna and Seckerton Pipeline Project. In the absence of any archaeological sites whatsoever, let alone a site or sites that show cultural heritage value or interest, it is recommended that the Ministry’s letter of review of this report include confirmation that no further archaeological assessment is required for the lands that are involved in Phase 3 of the proposed construction of the Dow Moore, Corunna and Seckerton Pipeline Project. Finally, it is requested that a copy of the Ministry’s letter be forwarded to Steve

Thurtell, Project Manager, Environmental Management, Stantec Consulting Ltd. His e-mail address is steve.thurtell@stantec.com.

The above comments conclude the general and site-specific recommendations of this report. Nevertheless, it should be emphasized that no archaeological survey can be considered to totally negate the potential for deeply buried cultural remains, including human burials. In recognition of that fact, the 1993 archaeological assessment technical guidelines formulated by the Province of Ontario require that all reports on archaeological assessments include recommendations to address the possibility that deeply buried remains may be encountered during construction (MCTR 1993:12).

Further to the above, it is recommended that archaeological staff of the Ontario Ministry of Tourism and Culture be notified immediately if any deeply buried archaeological remains should be discovered during earthmoving or construction related to the proposed Dow Moore, Corunna and Seckerton Pipeline Project and the greater NEXUS project. The pertinent contact person at the Ministry is Shari Prowse. She is the Archaeological Review Officer of the Culture Programs Unit of the Ministry who is responsible for the Southwest Region, within which the Dow Moore, Corunna and Seckerton Pipeline Project and the NEXUS Project are situated. Her telephone number is 519 675-6898 and her e-mail address is Shari.Prowse@ontario.ca.

In the event that human remains should be encountered during earthmoving or construction related to the Dow Moore, Corunna and Seckerton Pipeline Project and the greater NEXUS Project, it is similarly recommended that the proponent immediately contact the aforementioned Shari Prowse as well as Michael D'Mello. Mr. D'Mello is the Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Ontario Ministry of Consumer Services. His telephone number is 416 326-8404 and his e-mail address is Michael.D'Mello@ontario.ca.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

The standards and guidelines formulated by the Ministry of Tourism and Culture (2011) that came into effect on January 1, 2011 have requirements that archaeological assessment reports must include statements that concern compliance with pertinent legislation. Those statements were draughted by the Ministry's legal department. Furthermore, it is understood that in order for reports to conform to the current standards and guidelines the pertinent statements regarding compliance legislation must not only be cited but must also be quoted verbatim.

The pertinent standards in the current standards and guidelines are as follows:

1. Advice on compliance with legislation is not part of the archaeological record. However, for the benefit of the proponent and approval authority in the land use planning and development process, the report must include the following standard statements.

a. This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

b. It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has complete archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

c. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

d. The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any

person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

2. Reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following statement: "Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence."

The above standards are quoted verbatim from Section 7.5.9 of the standards and guidelines (Ministry of Tourism and Culture 2011: 126-127). All of them apply to the present report.

7.0 REFERENCES CITED

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Government of Ontario
1990a **The Ontario Heritage Act (RSO 1990)**. Queen's Printer, Toronto.

1990b **The Cemeteries Act (R.S.O. 1990)**. Queen's Printer, Toronto.

2002 **The Funeral, Burial and Cremation Services Act**. Queen's Printer, Toronto.

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1993 **Archaeological Assessment Technical Guidelines (Stages 1-3 and Reporting Format)**. Ministry of Culture, Tourism and Recreation, Cultural Programs Branch, Archaeology and Heritage Planning Unit.

Ontario Ministry of Tourism and Culture
2011 **Standards and Guidelines for Consultant Archaeologists.**

Phelps, Ed
1973 **Belden's Illustrated Historic Atlas of the County of Lambton, Ontario, 1880**. The Hunter Rose Company, Toronto, Ontario.

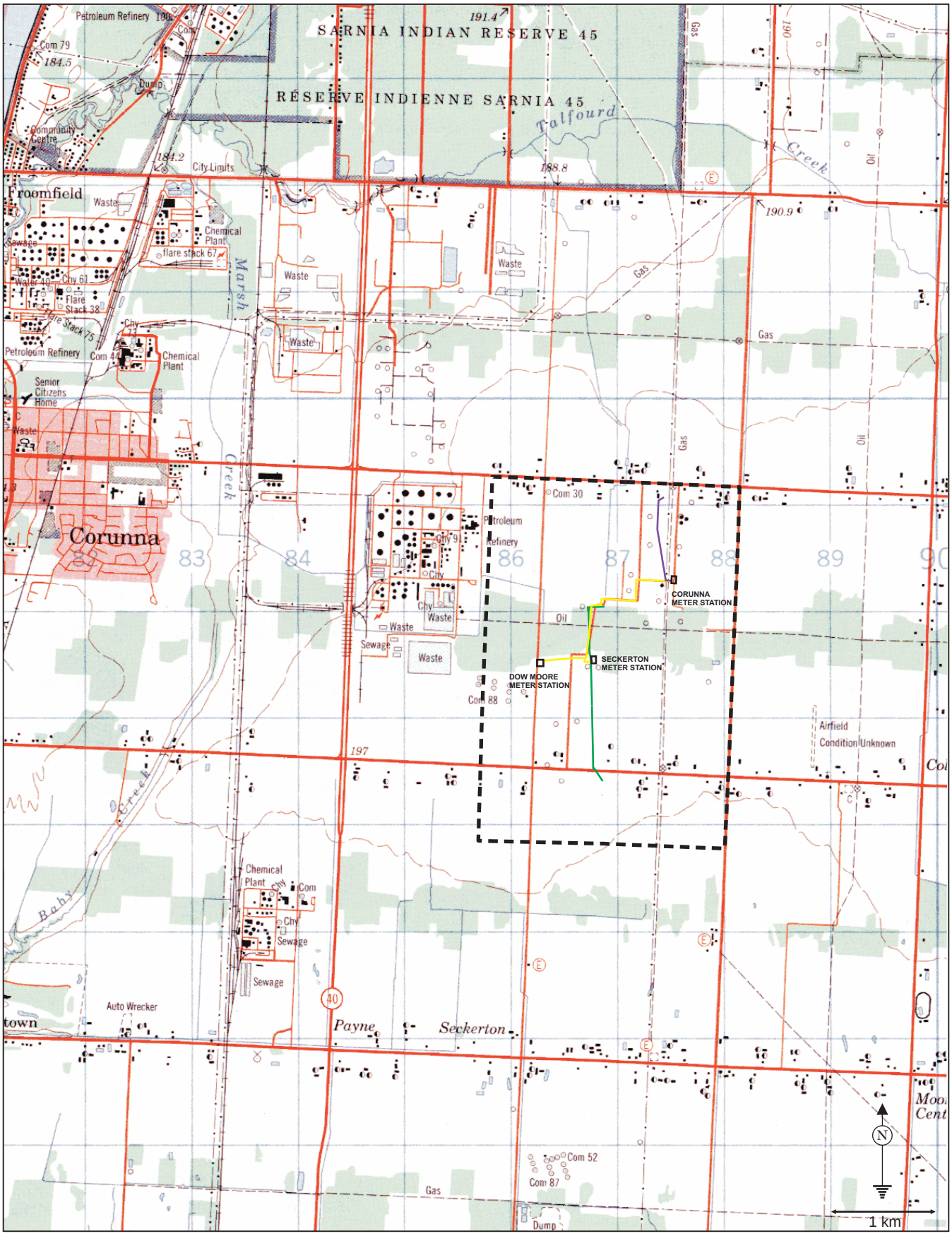
D.R. Poulton & Associates Inc.
2010 The 2010 Stage 1 Archaeological Assessment of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, Township of St. Clair, Lambton County, Ontario. November 15, 2010. Report on file, Ontario Ministry of Tourism and Culture.

2011a The 2011 Stage 2 Survey and Partial Stage 3 Archaeological Assessment of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lots 16-19, Concessions 8-10, Township of St. Clair, Lambton County, Ontario. May 19, 2011. Report on file, Ontario Ministry of Tourism and Culture.

2011b Supplementary Documentation on the 2011 Stage 2 Survey and Partial Stage 3 Archaeological Assessment of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lots 16-19, Concessions 8-10, Township of St. Clair, Lambton County, Ontario. May 19, 2011. Report on file, Ontario Ministry of Tourism and Culture.

D.R. Poulton & Associates Inc. (continued)
2011c The 2011 Stage 2 Archaeological Assessment of Phase 2 of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lots 16-19, Concession 8-10, Township of St. Clair, Lambton County, Ontario.

FIGURES



(Source: Canadian Department of Natural Resources and Soft Map Technolgies Inc. 1994-2001)

Figure 1 Location of the Dow Moore, Corunna and Seckerton Pipeline Project

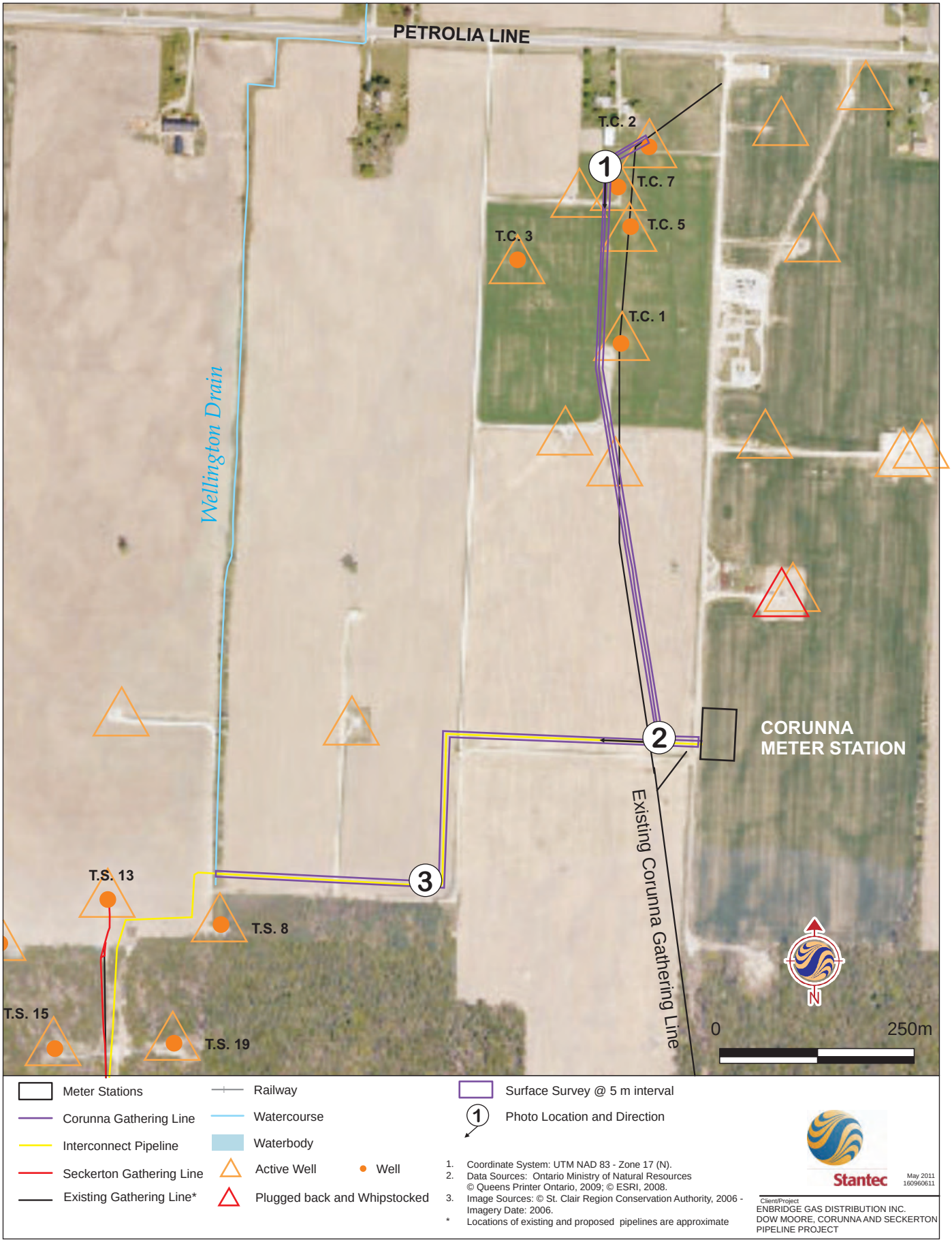


Figure 2 Location of Photographic Plates

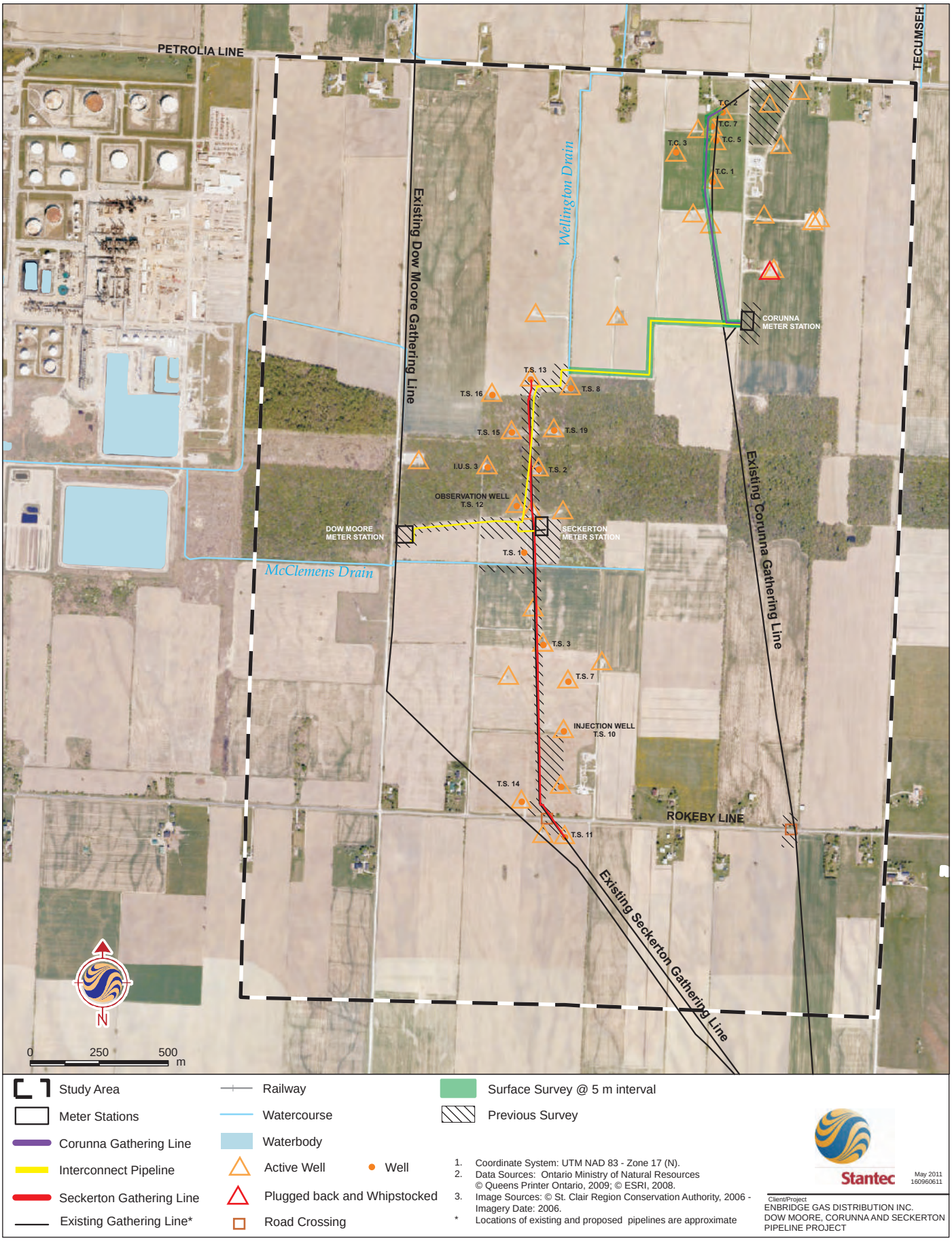


Figure 3 Archaeological Survey Methods and Coverage

PLATES

Plate 1

Surface Survey of the Corunna Gathering Line, View South

Plate 2

Interconnect Pipeline, View West

Plate 3

Close-up of Field Conditions

BOARD STAFF INTERROGATORY #3i[1]

INTERROGATORY

Reference: Evidence, Letter dated November 6, 2015 to the MNRF from Enbridge.

Preamble: In the letter dated November 6, 2015, Enbridge invited the MNRF to contact them if any further information is required.

a) Please file and comment of any correspondence with the MNRF, in addition to the materials on the record to date, with regard to the well drilling licence application.

b) Please describe any formal letters of assessment/review and compliance with the CSA Z341 that Enbridge requires from the MNRF. What is the expected timing of filing these documents with the OEB in support of this application?

RESPONSE:

(a) The discussions with MNRF have centred on responding to MNRF's questions on notification of aboriginal groups and arranging a meeting to discuss the Risk Assessment report. Below is a record of the correspondences.

- December 21, 2015 – Mr. Demetrius Kappos of the MNRF contacted Ms. Shari-Lynn Spratt of Enbridge by telephone regarding the Corunna well application. Mr. Kappos requested to speak to an Enbridge Representative to discuss the preliminary scope of the Procedural Order issued by the OEB on December 21, 2015.
- December 22, 2015 – Ms. Edith Chin of Enbridge contacted Mr. Demetrius Kappos and Ms. Michelle Wood of MNRF by telephone. Mr. Kappos and Ms. Woods asked if Enbridge had conducted consultation with the aboriginal groups for this application. Ms. Chin indicated that because of several years of activities in the general area, the Environmental Report for this application was an update to a detailed Environmental Report done in 2010 and that the aboriginal consultation was conducted for that application. Due to Enbridge

[1] There are two interrogatories labelled 3. The responses will refer to them as 3i and 3ii.

staff vacations, it was agreed between both parties to further the discussion after the Christmas break.

- January 4, 2016 – Mr. Scott Stoll, Counsel for Enbridge, contacted Mr. Demetrius Kappos and arranged for a telephone call with Mr. Kappos and Ms. Michelle Wood on January 5, 2016.
- January 4, 2016 – Ms. Kathy McConnell of Enbridge called Mr. Jug Manocha of MNRF to arrange an appointment to present the Risk Assessment. Mr. Manocha's voicemail indicated that he was out of the office until January 6, 2016. A message was left by Ms. McConnell that she would call back on January 6, 2016 to arrange a meeting.
- January 5, 2016 – Mr. Scott Stoll contacted Mr. Demetrius Kappos and Ms. Michelle Wood counsel for MNRF. Mr. Kappos and Ms. Wood indicated that the issue of notification arose because of nearby work done by Pembina. The MNRF Representatives asked that Enbridge send prior information which would show consultation. MNRF also asked about the status of the Risk Assessment.
- January 5, 2016 – Mr. Scott Stoll sent an email (attached Appendix A) to Mr. Kappos and Ms. Woods and included:

    1. the application of the initial project (EB-2010-0302) to the OEB from December 2010;
    2. the Environmental Report update for the current project which included the Stage 2 Archeological Assessment. Please see the Appendix to Board Staff Interrogatory # 2, found at Exhibit I-1-2, Appendix A.

    It also noted that the Risk Assessment would be completed on January 8, 2016 and that Enbridge was attempting to arrange a meeting with the MNRF on January 8, 2016 or January 11, 2016.

- January 6, 2016 – Ms. Kathy McConnell of Enbridge called Mr. Jug Manocha of MNRF and arranged to meet with Mr. Manocha on January 11, 2016 at the MNRF Office in London, Ontario.

- January 8, 2016 – Mr. Manocha called Ms. McConnell and postponed the meeting until January 12, 2016 and changed the venue to the Enbridge office in Mooretown, Ontario.
- January 12, 2016 – Mr. Chad Coxon of MNRF obtained the Risk Assessment from Ms. McConnell at the Enbridge Mooretown Office for delivery to Mr. Manocha, including a letter from Ms. McConnell to Mr. Manocha. (Attached Appendix B).
- January 12, 2016 – Ms. McConnell sent an email to Mr. Manocha confirming the pick-up of the Risk Assessment and asked about the review process of the Risk Assessment. (Attached Appendix C).

(b) Enbridge does not expect to receive any written correspondence from the MNRF prior to the issuance of the Board's decision in this matter. Typically, Enbridge would only receive a well license from the MNRF. The well license is only issued when MNRF is satisfied that Enbridge's proposed work is acceptable and in compliance with the CSA Z341. As this well is located within a DSA, the MNRF also requires the recommendation of the Board to issue the well license.

The review of the Risk Assessment by MNRF is expected to take several weeks. Enbridge does not foresee any issues at this time arising from the review of the Risk Assessment. Therefore, Enbridge would expect that the recommendation from the Board would be conditional upon compliance with CSA Z341 and MNRF's acceptance of the Risk Assessment.

Kathy McConnell

From: Scott Stoll <sstoll@airdberlis.com>
Sent: Tuesday, January 05, 2016 7:06 PM
To: 'Kappos, Demetrius (MNRF)'
Cc: Wood, Michelle (MNRF)
Subject: Additional information
Attachments: rpt_61088_Corunna3_ESR_20151203_fin_Print.pdf; EGDI_APPL_LTC_DowMooreCorunnaSeckerton_20101217.pdf.pdf

Demetrius and Michelle:

Further to our call this morning I have attached two files: (a) the application to the OEB from December 2010 for the larger project; and (b) the Environmental report for this project which includes the Stage 2 Archeological Assessment. You will note on pdf page 166 of the EGDI Application that Enbridge had committed to providing copies of the Application to the First Nations listed and following up with them. There was no interest expressed and none of the First Nations participated in the OEB proceeding.

I did follow up on the Risk Assessment which my client is to receive by Friday. I understand that my client, Kathy McConnell, has reached out to Jug Manocha to discuss the Risk Assessment Friday or Monday. However, we understand that Jug is out of the office until tomorrow so nothing has been firmed up yet.

I trust this is helpful.

Scott

Scott Stoll

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Gas Storage Operations
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Phone: (519) 862-6032
Fax: (519) 862-1168

ENBRIDGE

January 12, 2016

Ministry of Natural Resources and Forestry
Petroleum Operations Section
659 Exeter Road
London, Ontario
N6E 1L3

Attention: Jug Manocha, Operations Engineer

Subject: Submittal of Risk Assessment for the Corunna Pool

Please find enclosed the "What If" Analysis of Hazard and Operability Issues; Corunna Pool completed by UGM Engineering Ltd. This document is being provided by Enbridge Gas Distribution Inc. (EGDI) to the Ministry of Natural Resources and Forestry (MNRF) for a confidential review. Upon completion of the review, the document should be returned to Kathy McConnell at Enbridge Gas Distribution Inc. at the address listed below. We would be pleased to meet with you to review or clarify any portion of the report.

If any further information is required please contact the undersigned at 519-862-6032.

Yours truly,

Kathy McConnell, P.Geo
Manager, Reservoir Development
3595 Tecumseh Road
Mooretown, Ontario
N0N 1M0

Enclosures: "What If" Analysis of Hazards and Operability Issues of the Corunna Pool

From: Kathy McConnell
To: jug.manocha@ontario.ca
Subject: Risk Assessment for Enbridge Corunna DSA
Date: Tuesday, January 12, 2016 3:54:00 PM

Good Afternoon Jug,

Mr. Chad Coxon of your office has just obtained the Corunna Risk Assessment from the Enbridge Mooretown Office for delivery to you. Attached to the Risk Assessment is a covering letter requesting that the Risk Assessment be kept confidential and that upon completion of your review that the Risk Assessment be returned to the Enbridge Mooretown office. If you have any questions or concerns and would like to discuss them, please contact me.

Will you be sending any correspondence concerning the outcome of the Ministry's review?

Regards,

Kathy

Kathy McConnell P. Geo.
Manager Reservoir Development

ENBRIDGE GAS STORAGE
TEL: 519-862-6032 | FAX: 519-862-1168 | CELL: 519-312-2168
3595 Tecumseh Road, Mooretown, Ontario, N0M 1M0

enbridgegas.com
Integrity. Safety. Respect.

BOARD STAFF INTERROGATORY #3ii[1]

INTERROGATORY

Reference: Enbridge Application page 1, Application for Well Licence (Form1)

Preamble: In the Application for Well Licence (Form 1), it is noted that landowner whose consent is required for the well application and drilling is "unavailable for signature, still attempting to contact".

a) Please describe the potential impacts on the affected landowner.

b) What is the status and expected timing of obtaining the consent of the landowner?

RESPONSE:

a) Enbridge is of the view that new potential impacts to the landowner, Richard Wellington, will be minimal. The subject property has been an integral component of Enbridge's oil and gas production since 1950 and gas storage operations since 1964. The property has accommodated the following wells and associated facilities:

- 4 oil and/or gas production wells have been drilled over time with laneways installed to them. At the present time, one oil production well still remains on the property with an associated laneway;
- 7 gas storage wells have been drilled over time. At the present time, there are 5 active gas storage wells on the property and one integrity inspection tool launcher/receiver. All of the facilities except 2 of the gas storage wells have associated lanes, as shown on the attached aerial photo (Appendix A).

In 2013 Enbridge commenced the abandonment of gas storage well TC 4. This abandonment was completed in 2015 except for some of the restoration work because some of the area would be impacted by the drilling of the proposed well TC 9H. The proposed location of well TC 9H is about 42 metres north of the former location of well TC 4. It is located to be in line with an existing laneway and very close to the main gathering line. As a result, an extension of only 44 metres of laneway and 22 metres of gathering line are required for TC 9H. Enbridge is of the

[1] There are two interrogatories labelled 3. The responses will refer to them as 3i and 3ii.

Witnesses: T. Chupa
K. McConnell

view that the removal of TC 4 and the installation of TC 9H would actually be a reduction to the impact on the landowner and tenant farmer.

The replacement well does not change the rights and obligations of Enbridge and the landowner. The landowner will be compensated per usual practices for the drilling of a well. In a meeting on October 14, 2015, Enbridge outlined to Mr. Wellington the estimated compensation amount based on its usual compensation practices.

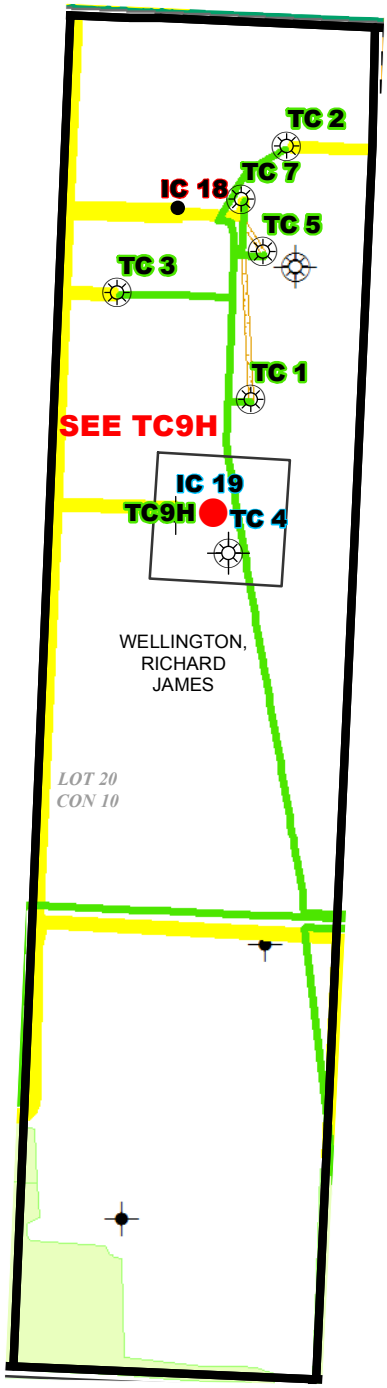
b) The consent sought from Mr. Wellington is in respect of the provision of information to the MNRF regarding the landowner and not with respect to a consent to proceed with the well. Enbridge is still attempting to obtain Mr. Wellington's signature but has not been able to meet with Mr. Wellington.

Enbridge has in the past months left phone messages and forwarded email communications on numerous occasions, inviting to meet with Mr. Wellington at a time of convenience to him (including outside of normal business hours) to continue the landowner interaction process. However, to date, despite these efforts, Mr. Wellington has not indicated a time he is willing to meet with Enbridge. Enbridge will continue its efforts to meet with Mr. Wellington.

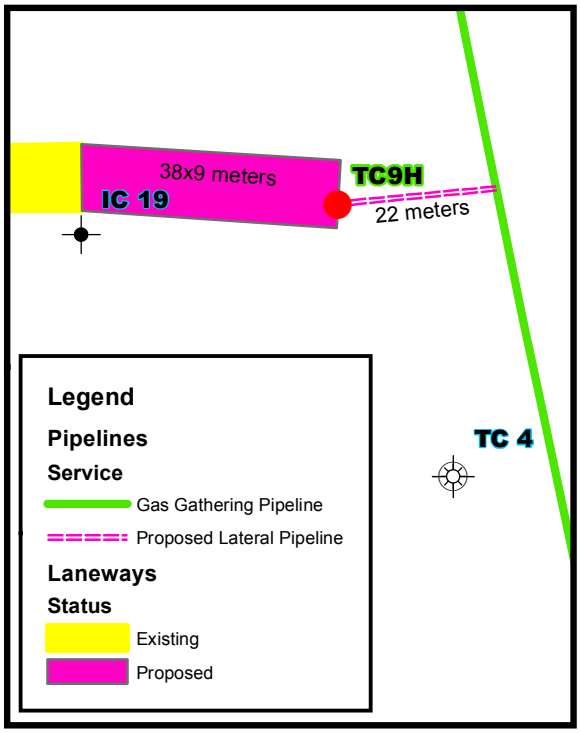
Attached is a letter from Enbridge to Mr. Wellington dated November 6, 2015, referencing some of the prior attempts to communicate with Mr. Wellington to discuss the project. (Appendix B)

R. WELLINGTON PROPERTY - PROPOSED TC9H WELL - LAND IMPACT

Filed: 2016-01-21
EB-2015-0303
Exhibit I
Tab 1
Schedule 3ii
Appendix A
Page 1 of 1



TC9H



Legend

Well - Gas Storage
- Gas Storage
- PROPOSED WELL

Well - Abandoned
- Abandoned Gas Storage
- Abandoned Oil Well

Well - Oil
- Oil Well

Laneways

Status
- Deemed
- Existing

Pipelines

Service
- Gas Gathering Pipeline

0 70 140 280 420 560 Meters

ENBRIDGE
GAS STORAGE OPERATIONS
3595 TECUMSEH ROAD
MOORETOWN ONT N0N-1M0
PHONE: (519) 862-1473
FAX: (519) 862-1168

LAMBTON COUNTY, ONTARIO

APPLICATION TO DRILL TC9H
EXISTING FACILITIES ON
RICHARD WELLINGTON PROPERTY

Drawn By:	Date: JAN 12, 2016
Dwg. GIS: SGIS_Dynamic-TC9H-LAND	Rev 1

Gas Storage Operations
3595 Tecumseh Road
MOORETOWN ON
N0N 1M0

Terry Chupa SR/WA
Land Agent/Land Contracts Manager
Tel 519 862-6008
Fax 519 862-1168
Email terry.chupa@enbridge.com

ENBRIDGE

November 6, 2015

File No: L50G-7284B-020

Richard Wellington
380 Albert Street
Corunna ON N0N 1G0

By Courier and Email

RE: Enbridge Application to the Ministry of Natural Resources & Forestry - Well TC 9H (Horiz#1) Moore 4-2-10

Further to our recent meeting(s) and communications by email, telephone and exchange of voicemail messages I am writing to confirm Enbridge's plans to enhance its gas storage operations and specifically its plans with respect to the above-noted proposed well.

As previously discussed, Enbridge proposes to continue the development of the Corunna Pool by constructing a new well on your property. For clarity this proposed well is identified as "Well TC 9H". We are proposing that this well be constructed in accordance with plans/specifications previously provided to you, including the following;

- October 6, 2015 – Emailed aerial photo identifying Well TC 9H drill pad dimensions and proposed rig layout;
- October 14, 2015 – Emailed composite tile map of north portion of property (based on understanding of tile maps currently in Enbridge's possession); and
- October 14, 2015 – Hand delivered plan illustrating proposed tile installation surrounding proposed Well TC 9H pad.

It is Enbridge's intent that neither the proposed lateral pipeline serving Well TC 9H nor the main gathering pipeline impact additional lands as both are within the confines of the Well TC 9H pad.

I confirm that to date, despite our numerous attempts, we have not received your response to our efforts to reach an agreement on the proposed Well TC 9H. We are surprised that a response has not been provided as there is a history of successful work conducted by Enbridge on your property in connection with the Corunna Pool including: completion of the nexus pipeline; lane additions/deletions; installation of a launcher/receiver facility for pipeline integrity; abandonment of two gas storage wells; and, conversion of an injection/withdrawal well to an observation well.

In the absence of your response, I confirm that Enbridge will be applying directly to the Ministry of Natural Resources & Forestry for the necessary approvals to construct Well TC 9H as proposed. Pending your response we will be submitting the application on November 6, 2015 and seeking approval to commence construction of the drill pad on November 23, 2015 (weather permitting) and commence drilling operations on April 1, 2016 (weather permitting).

In the event you elect to consent to Enbridge's proposal enclosed please find two copies of Form 1 " Application for a Well Licence" for Well TC 9H. We ask that you please execute (as indicated) and return one copy of the executed document to the writer in the enclosed envelope at your earliest convenience.

If you wish to discuss this matter please contact me by telephone at the Enbridge Tecumseh Gas Storage Office (519-862-6008).

Yours truly,

Terry Chupa SR/WA
Land Agent/Land Contracts Manager

c/c Scott Wellington

24206707.3

BOARD STAFF INTERROGATORY #4

INTERROGATORY

Reference: EB-2015-0303 Application

Preamble: Enbridge applied for well drilling licences under section 40(1) of the OEB Act. Should the OEB find the applications in the public interest it would issue a favourable report to the Minister of Natural Resources and Forestry (Report) recommending issuance of well licences.

Please comment on the attached OEB staff proposed draft conditions of approval. Please note that these conditions are draft version subject to additions or changes.

RESPONSE:

Enbridge has reviewed the Board staff proposed draft conditions of approval and does not have any major concerns. Enbridge notes that Article 3.1 indicates that

> 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.

As it is difficult to conduct a proper assessment of the project area in the winter and early spring, Enbridge requests that the condition be revised to:

> 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. Where the deadline falls between December 1 and May 31, the deadline will be revised to the following June 1.

All other conditions will be adhered to by Enbridge.

Witnesses: S. Kingdon-Benson,
H. Steinberg

MNRF INTERROGATORY #1

INTERROGATORY

Reference: Pre-filed Evidence, Letter dated November 6, 2015 to the MNRF from Enbridge, page 1.

MNRF understands that there is a Risk Assessment report which will be provided by the Applicant to the MNRF shortly.

a) Has that risk assessment identified any shortcomings that will need to be addressed in advance of approval or prior to drilling and operation of the proposed well?

b) Has the risk assessment been conducted in accordance with CSA Z341, in particulars. 7.1: Risk Assessment and s. 7.2: Assessment of Neighbouring Activities?

RESPONSE:

a) No. The Risk Assessment report did not identify any shortcomings that will need to be addressed in advance of approval or prior to drilling and operation of the proposed well.

b) Yes. The Risk Assessment has been conducted in accordance with CSA Z341, in particular s. 7.1: Risk Assessment and s. 7.2: Assessment of Neighbouring Activities.

Witness: K. McConnell

MNRF INTERROGATORY #2

INTERROGATORY

Reference: EB-2015-0303 Application

Please confirm that the operation of the well, including maintenance and emergency management, will be conducted in accordance with CSA Z341.

RESPONSE:

The operation of the proposed well, including maintenance and emergency management will be conducted in compliance with CSA Z341.

Witness: K. McConnell

MNRF INTERROGATORY #3

INTERROGATORY

Reference: EB-2015-0303 Application

a) Has notice of the application been provided to aboriginal group(s) with any interest in the lands affected by the subject project? If so, what form of notice has been provided and to whom?

b) What response(s) was received further to any notice of this application being provided?

c) Please provide us with a copy of all documentation and correspondence related to the above.

RESPONSE:

a), b) and c)

Notice of this Application was made as required under the Board's letter of direction. However, it appears the question is seeking to understand the consultation efforts that have been undertaken by Enbridge regarding work in the area. As indicated in the Environmental Report for this Application, the Environment Report is an update to a detailed Environmental Report completed by Enbridge in 2010 (the "2010 ER") for the Dow Moore, Corunna and Seckerton Pipeline Project (EB-2010-0302). This Application pertains to a small area within the study area of the 2010 ER. The 2010 ER included consultation with the following aboriginal groups:

Aamjiwnaang First Nation
Attention: Chief Christopher Plain
978 Tashmoo Avenue
Sarnia, ON N7T 7H5

Chippewas of Kettle and Stony Point
Attention: Chief Elizabeth J. Cloud
6247 Indian Lane
R.R.# 2
Forest, ON N0N 1J0

Witnesses: B. Black
H. Steinberg

Walpole Island First Nation
Attention: Chief Joseph B. Gilbert
R.R.# 3
Wallaceburg, ON N8A 4K9

Pursuant to the Board's direction in EB-2010-0302, Enbridge served the above listed First Nations with notice of that OEB Application. No indication of interest, concern of an impact or potential impact to any aboriginal or treaty was received by Enbridge from any of the First Nations in respect of the pipeline and well work. Copies of the consultation done in connection with the 2010 ER and the application are attached. (Appendices A, B and C). Enbridge confirms that during the construction in 2011, that no new information was discovered that alters the conclusions from the 2010 ER.

It should be pointed out that this well is being drilled in an area that has been actively farmed and used for continuous storage operations activities for the past fifty years. As part of the 2010 ER, Archeological Assessments, Stage 1 and Stage 2, were completed and registered by the Ministry of Tourism, Culture and Sport ("MTCS"). A list of the archeological reports is provided below. No areas of potential archeological significance were identified.

Archeological Reports:

P316-093-2010 "The 2010 Stage 1 Archaeological Assessment of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, Township of St. Clair, Lambton County, Ontario" was submitted to MTCS on November 15, 2010. MTCS entered this report into the register on November 26, 2010.

P316-113-2011 "The 2011 Stage 2 and Partial Stage 3 Archaeological Assessment of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lots 16-19, Concessions 8-10, Township of St. Clair, Lambton County, Ontario" was submitted to MTCS on May 19, 2011. MTCS entered this report into the register on May 30, 2011

P316-121-2011 "The 2011 Stage 2 Archaeological Assessment of Phase 2 of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lots 16-19, Concessions 8-10, Township of St. Clair, Lambton County, Ontario" was entered into the register on June 1, 2011. The addendum report (same PIF no.), "ADDENDUM: The 2011 Stage 2 Archaeological Assessment of Phase 2 of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lots 16-19, Concessions 8-10, Township of St. Clair, Lambton County, Ontario" was

submitted to MTCS on May 30, 2011. MTCS entered this report into the register on June 7 2011.

P316-125-2011 "The June 10, 2011 Stage 2 Archaeological Assessment of Phase 3 of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, NEXUS Project, Lot 20, Concession 10, Township of St. Clair, Lambton County, Ontario" was submitted to MTCS on June 12, 2011. MTCS entered this report into the register on June 14, 2011.

Stantec Consulting Ltd.
70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

October 13, 2010
File: 160960611

Agency
Address
Town, Province
Postal Code

Attention: Title. F_Name L_Name, Position

Dear Title. L_Name:

Reference: Dow Moore, Seckerton and Corunna Interconnect Pipeline Project

Stantec Consulting Ltd. ("Stantec") has been retained by Enbridge Gas Distribution Inc. (EGDI), to prepare an Environmental and Socio-Economic Assessment Report (ER) for a project involving approximately 3,500 meter (m) of buried natural gas pipeline south of Sarnia, Ontario. This project is part of the ongoing expansion of the natural gas storage system in St. Clair Township.

The project comprises three sections. One section of this pipeline project includes the construction of a gathering pipeline, 1,500 m long and 508 mm (20 inch) in diameter, within the Seckerton pool and another 400 m section of 508 mm (20 inch) diameter pipeline to replace an existing 406 mm (16 inch) section of gathering pipeline in the Seckerton pool. As well, the project includes the construction of approximately 1,500 m of 508 mm (20 inch) diameter steel pipeline to connect the existing Dow Moore gathering pipeline to the proposed gathering pipelines for the Corunna and Seckerton natural gas storage pools. The ER will meet the requirements of the Ontario Energy Board's ("OEB") Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon pipelines and facilities in Ontario (May 2003).

A Study Area surrounding the project has been identified within the area west of Tecumseh Road, south of Petrolia Line, approximately 600 m south of Rokeby Line, and 500 m west of Ladysmith Road, as shown on the attached map. The properties being screened to locate existing environmental features are listed below.

COUNTY	TOWNSHIP	CONCESSION	LOT
Lambton	Moore	10	Part of Lot 22
Lambton	Moore	10	Lot 21
Lambton	Moore	10	Lot 20
Lambton	Moore	10	Lot 19
Lambton	Moore	9	Part of Lot 22
Lambton	Moore	9	Lot 21
Lambton	Moore	9	Lot 20
Lambton	Moore	9	Lot 19
Lambton	Moore	8	Part of Lot 22
Lambton	Moore	8	Lot 21
Lambton	Moore	8	Lot 20
Lambton	Moore	8	Lot 19

Reference: Dow Moore, Seckerton and Corunna Interconnect Pipeline Project

At this time, Stantec is collecting information and compiling an environmental inventory for these associated lands. We ask that you review the parcels potentially affected and provide any relevant environmental information that your Agency/Group has regarding this project. Please note that responses would be appreciated prior to October 22, 2010.

Thank you for your time in responding to our request. If you have any questions concerning the project or the ER please contact the undersigned by phone or email.

Sincerely,

STANTEC CONSULTING LTD.

Steve Thurtell
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
steve.thurtell@stantec.com

Attachment: Location Map

500 Consumers Road
North York, Ontario
M2J 1P8
PO Box 650
Scarborough ON M1K 5E3

Lesley Austin
Regulatory Coordinator
Regulatory Proceedings
phone: (416) 495-6505
fax: (416) 495-6072

VIA COURIER

January 25, 2011

To:

Aamjiwnaang First Nation Attention: Chief Christopher Plain 978 Tashmoo Avenue Sarnia, ON N7T 7H5
Chippewas of Kettle and Stony Point Attention: Chief Elizabeth J. Cloud 6247 Indian Lane R.R.# 2 Forest, ON N0N 1J0
Walpole Island First Nation Attention: Chief Joseph B. Gilbert R.R.# 3 Wallaceburg, ON N8A 4K9

Re: Enbridge Gas Distribution Inc. ("Enbridge")
Dow Moore, Corunna and Seckerton Pipeline Project Application ("Application") – EB-2010-0302
Ontario Energy Board (the "Board") Notice of Application and Hearing

As directed in the Board's January 20, 2011 Letter of Direction, attached please find a copy of the Board's Notice of Application and Hearing, and Enbridge's Application dated December 17, 2010, as well as Enbridge's updated evidence dated January 21, 2011.

Please contact the undersigned if you have any questions.

Sincerely,

Lesley Austin
Regulatory Coordinator
EGDRegulatoryProceedings@enbridge.com

Ontario Energy Board

Commission de l'énergie de l'Ontario

Ontario

EB-2010-0302

NOTICE OF APPLICATION AND WRITTEN HEARING FOR LEAVE TO CONSTRUCT NATURAL GAS PIPELINES TO ENHANCE PIPELINE CONNECTIONS BETWEEN DOW MOORE , CORUNNA, AND SECKERTON DESIGNATED GAS STORAGE POOLS IN THE TOWNSHIP OF ST. CLAIR IN LAMBTON COUNTY

ENBRIDGE GAS DISTRIBUTION INC.

Enbridge Gas Distribution Inc. (the "Applicant" or "Enbridge") filed an application with the Ontario Energy Board on December 17, 2010, 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 3,500 meters of 4 segments of extra high pressure pipelines, to enhance pipeline connections between Dow Moore, Corunna, and Seckerton natural gas storage pools in the Township of St. Clair in Lambton County. The Board has assigned the application file number EB-2010-0302.

The four proposed pipeline segments are required to move gas to and from the Dow Moore, Corunna, and Seckerton storage reservoirs, and the Corunna Compressor Station. The proposed routes for the four segments are as follows:

1. The first segment of pipeline is approximately 1,900 metres of nominal pipe size ("NPS") 20 (inches in diameter) steel pipeline ("Interconnect Pipeline"). The Interconnect Pipeline will connect to the existing Dow Moore Pool Line via a new metering station ("Dow Moore Metering Station"), and then to two metering stations at the Seckerton and Corunna storage reservoir sites ("Seckerton Metering Station" and "Corunna Metering Station", respectively).

2. The second segment is approximately 1,500 metres of NPS 20 steel pipeline. This pipeline will connect to the gas wells in the Seckerton storage reservoir through new lateral connections, and the pipeline will tie-in to the Seckerton Metering Station.

3. The third segment is approximately 50 metres of NPS 20 steel pipeline ("Seckerton Pool Line Station Tie-In"). The Seckerton Pool Line Station Tie-In will connect the existing NPS 20 steel Seckerton pool line to the Seckerton Metering Station.

4. The fourth segment is approximately 50 metres of NPS 16 steel pipeline ("Corunna Pool Line Station Tie-In"). The Corunna Pool Line Station Tie-In will connect the existing NPS 16 steel Corunna pool line to the Corunna Metering Station.

This pipeline project is part of Enbridge's storage enhancement programme which also includes replacement of Corunna Pool Gathering Pipeline and delta pressuring (increasing the pressure) of Corunna and Seckerton storage pools. Approval of the Board is required only for the four segment pipeline project. A map showing the location of the proposed pipeline segments route is attached as Appendix "A" to this Notice. Construction is planned to start in June 2011. In-service is planned for September 2011.

How to see Enbridge's Application

Copies of the application are available for inspection at the Board's office in Toronto and on its website, www.oeb.gov.on.ca/OEB/Industry , and at Enbridge's office and may be on its website.

Written Hearing

The Board intends to proceed with this matter by way of a written hearing unless a party satisfies the Board that there is a good reason for holding an oral hearing. If you object to the Board holding a written hearing in this matter, you must provide written reasons why an oral hearing is necessary. Any submissions supporting an oral hearing must be received by the Board and copied to the applicant within **10 days** of the publication or service date of this notice.

How to Participate

You may participate in this proceeding in one of three ways:

1. Become an Intervenor

Intervenors participate actively in the proceeding (i.e., submit written questions, evidence, and arguments, and cross-examine witnesses at an oral hearing).

A request for intervenor status must be made by letter of intervention and be received by the Board no later than **10 days** from the publication or service date of this notice. A letter of intervention must include: (a) a description of how you are, or may be, affected by the outcome of this proceeding; (b) if you represent a group, a description of the group and its membership; and (c) whether you intend to seek an award of costs and the grounds for your cost award eligibility.

You must provide a copy of your letter of intervention to the applicant.

Everything an intervenor files with the Board, including the intervenor's name and contact information, will be placed on the public record, which means that all filings will be available for viewing at the Board's offices and will be placed on the Board's website.

If you already have a user ID, please submit your intervention request through the Board's web portal at www.errr.oeb.gov.on.ca. Additionally, two paper copies must be submitted to the address set out below.

If you do not have a user ID, visit the Board's website under e-Filing Services and complete a user ID/password request form. For instructions on how to submit documents and naming conventions please refer to the RESS Document Guidelines found at www.oeb.gov.on.ca/OEB/Industry, e-Filing Services.

The Board also accepts interventions by e-mail, at the address below, and again, two additional paper copies are required. Those who do not have internet access are required to submit their intervention request on a CD in PDF format, along with two paper copies.

2. Send a Letter with your Comments to the Board

If you wish to comment on the proceeding without becoming an intervenor, you may submit a letter of comment to the Board Secretary.

All letters of comment sent to the Board will be placed on the public record, which means that the letters will be available for viewing at the Board's offices and will be placed on the Board's website.

Before placing the letter of comment on the public record, the Board will remove any personal (i.e., not business) contact information from the letter of comment (i.e., the address, fax number, phone number, and e-mail address of the individual). However, the name of the individual and the content of the letter of comment will become part of the public record.

A complete copy of your letter of comment, including your name, contact information, and the content of the letter, will be provided to the applicant and the Hearing Panel.

Your letter of comment must be received by the Board no later than **30 days** from the publication or service date of this notice. The Board accepts letters of comment by either post or e-mail at the addresses below.

3. Become an Observer

Observers do not participate actively in the proceeding but receive documents issued by the Board in the proceeding. There is no fee for observers to receive documents issued by the Board.

A request for observer status must be made in writing and be received by the Board no later than **10 days** from the publication or service date of this notice. The Board accepts observer request letters by either post or e-mail at the addresses below.

All letters requesting observer status will become part of the public record, which means that the letters will be available for viewing at the Board's offices and will be placed on the Board's website.

Before placing the request for observer status on the public record, the Board will remove any personal (i.e., not business) contact information from the request (i.e., the address, fax number, phone number, and e-mail address of the individual). However, the name of the individual and the content of the request for observer status will become part of the public record.

Observers may also request documents filed by the applicant and other parties to the proceeding but must request these documents directly from the relevant party. Observers may be required to pay for the costs of reproducing and delivering the material.

Most documents filed in this application will also be available on the Board's website.

How to Contact Us

In responding to this Notice, please reference Board file number EB-2010-0302 in the subject line of your e-mail or at the top of your letter. It is also important that you provide your name, postal address and telephone number and, if available, an e-mail address and fax number. All communications should be directed to the attention of the Board Secretary at the address below, and be received no later than 4:45 p.m. on the required date.

Need More Information?

Further information on how to participate may be obtained by visiting the Board's www.oeb.gov.on.ca/OEB/Industry or by calling our Consumer Relations Centre at 1-877-632-2727.

IMPORTANT

IF YOU DO NOT FILE A WRITTEN SUBMISSION OBJECTING TO A WRITTEN HEARING OR DO NOT PARTICIPATE IN THE HEARING BY FILING WRITTEN SUBMISSIONS IN ACCORDANCE WITH THIS NOTICE, THE BOARD MAY PROCEED WITHOUT YOUR PARTICIPATION AND YOU WILL NOT BE ENTITLED TO FURTHER NOTICE IN THIS PROCEEDING.

Addresses

The Board:

Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto ON M4P 1E4
Attention: Board Secretary
Filings: https://www.errr.oeb.gov.on.ca/

E-mail: boardsec@oeb.gov.on.ca
Tel: 1-888-632-6273 (Toll free)
Fax: 416-440-7656

The Applicant:

Enbridge Gas Distribution Inc.
Regulatory Affairs
500 Consumers Road
Toronto, Ontario M2J 1 P8

Email:
EGDRegulatoryProceedings@enbridge.com
Tel: 416-495-5499
Fax: 416-495-6072

Counsel of the Applicant:
Mr. Scott Stoll
Aird & Berlis LLP
Suite 1800, Box 754
Brookfield Place, 181 Bay Street
Toronto, Ontario M5J 2T9

E-mail: sstoll@airdberlis.com
Tel: 416-865-4703
Fax: 416-863-1515

DATED at Toronto, January 20, 2011

ONTARIO ENERGY BOARD

Original signed by

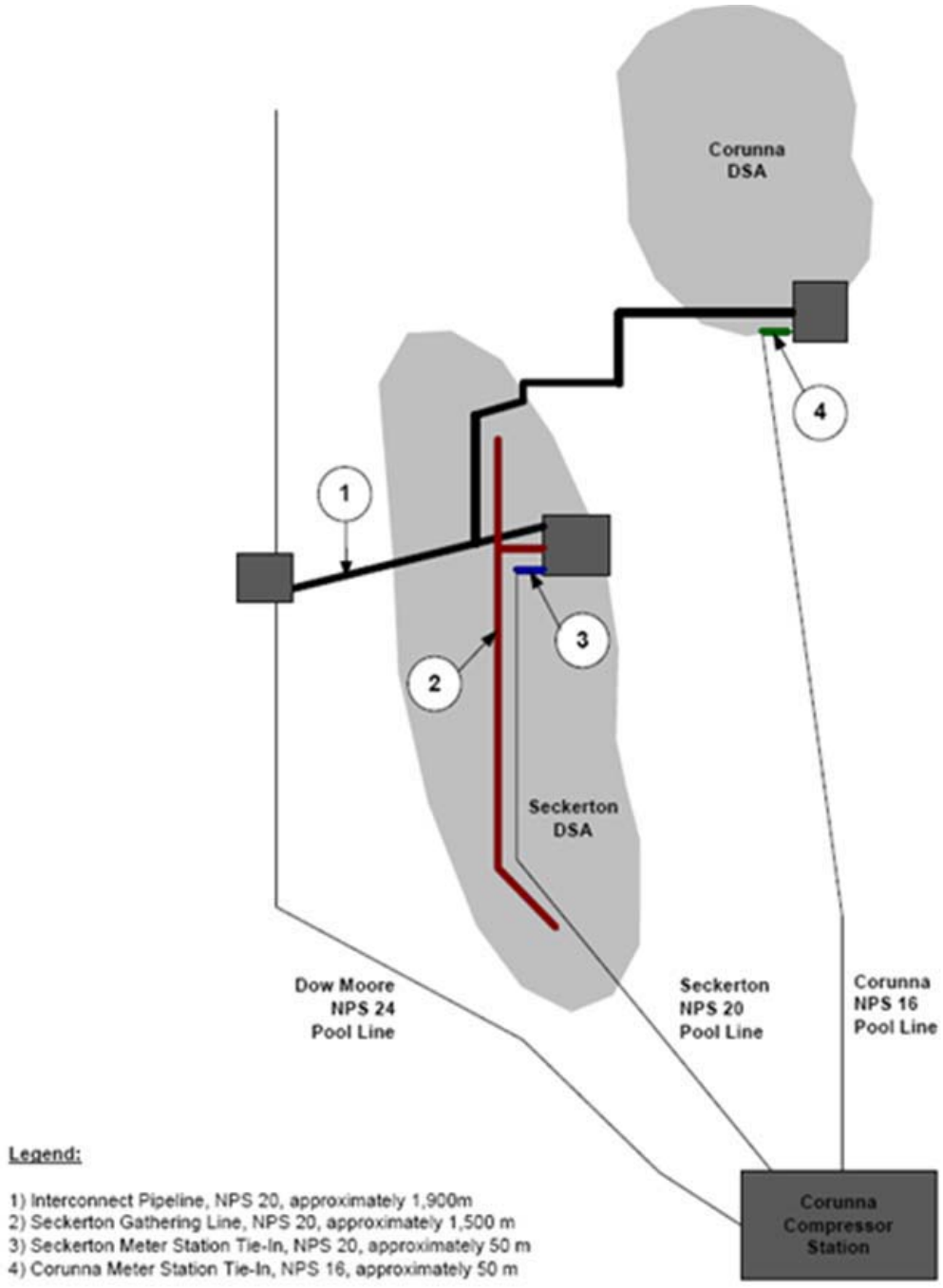
Kirsten Walli
Board Secretary

Appendix A

Enbridge Gas Distribution Inc.
EB-2010-0302

January 20, 2011

Map of the Proposed Project



Legend:

1) Interconnect Pipeline, NPS 20, approximately 1,900m
2) Seckerton Gathering Line, NPS 20, approximately 1,500 m
3) Seckerton Meter Station Tie-In, NPS 20, approximately 50 m
4) Corunna Meter Station Tie-In, NPS 16, approximately 50 m

500 Consumers Road
North York, Ontario M2J 1P8
P.O. Box 650
Scarborough ON M1K 5E3

Edith Chin
Manager Upstream Regulatory Strategy &
Major Projects
phone: (416) 753-7872
fax: (416) 495-6072
Email: edith.chin@enbridge.com

December 17, 2010

VIA RESS AND COURIER

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

Dear Ms Walli:

Re: Enbridge Gas Distribution Inc. ("Enbridge")
Leave to Construct – Dow Moore, Corunna and Seckerton Pipeline Project ("Project")
Board File No.: EB-2010-0302 – Application and Evidence

Enbridge is submitting to the Ontario Energy Board (the "Board"), an application for leave to construct four segments of pipe totaling approximately 3500 metres and related facilities. These facilities are part of a project to enable the expansion of Enbridge's Tecumseh storage.

The Environmental Screening Report ("ER") for the Project was submitted to the Ontario Pipeline Coordinating Committee ("OPCC") on November 29, 2010. To date Enbridge has not received inquiries from the OPCC membership regarding this Project. The ER is enclosed within the Application at Exhibit B, Tab 2, Schedule 2.

This submission has been filed through the Board's RESS, with two copies being delivered to the Board by courier. Enbridge's Dow Moore, Corunna and Seckerton Pipeline Project Application will be available on the Enbridge website at www.enbridgegas.com, on December 22, 2010.

Sincerely,

Edith Chin

cc: Scott Stoll, Aird & Berlis
OPCC Members (via email)

Filed: 2010-12-17
EB-2010-0302
Exhibit A
Tab 1
Schedule 1
Page 1 of 2

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A – GENERAL

B – ROUTING AND ENVIRONMENTAL

C – FACILITIES

TABLE OF CONTENTS

D – LAND ISSUES

E – Aboriginal Consultation

Filed: 2010-12-17
EB-2010-0302
Exhibit A
Tab 2
Schedule 1
Page 1 of 4

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998,* S.O. 1998, c. 15 (Schedule B);

AND IN THE MATTER OF an application by Enbridge Gas Distribution Inc. for an order or orders granting leave to construct natural gas pipelines in Concession 9, Lot 21 and Concession 10, Lots 19, 20 and 21 in the former Township of Moore, in the Township of St. Clair, in the County of Lambton.

DOW MOORE, CORUNNA AND SECKERTON PIPELINE PROJECT
LEAVE TO CONSTRUCT
APPLICATION

1. The Applicant, Enbridge Gas Distribution Inc. ("**Enbridge**" or the "**Company**"), is an Ontario corporation with its head office in the City of Toronto. It carries on the business of selling, distributing, transmitting and storing natural gas within Ontario.

2. Enbridge is seeking leave to construct four segments of extra high pressure pipelines in existing designated storage areas to enhance the storage service. A map showing the proposed pipelines may be found at Exhibit B, Tab 2, Schedule 2, Figure No. 4.

3. The first segment of pipeline is approximately 1900 metres of NPS 20 steel pipeline (**"Interconnect Pipeline**") with a maximum operating pressure of 1 700 psig (11 730 kPa). The Interconnect Pipeline will connect to the existing Dow Moore Pool Line via a new metering station ("Dow Moore Metering Station"), and then to two metering stations at the Seckerton and Corunna storage reservoir sites ("Seckerton Metering Station" and "Corunna Metering Station", respectively).

4. The second segment of pipeline is approximately 1500 metres of NPS 20 steel pipeline ("**Seckerton Gathering Line**") with a maximum operating pressure of 1 700 psig (11 730 kPa). This pipeline will connect to the gas wells in the Seckerton storage reservoir through new lateral connections, and the pipeline will tie-in to the Seckerton Metering Station.

5. The third segment of pipeline is approximately 50 metres of NPS 20 steel pipeline ("**Seckerton Pool Line Station Tie-In**"), with a maximum operating pressure of 1 700 psig (11 730 kPa). The Seckerton Pool Line Station Tie-In will connect the existing NPS 20 steel Seckerton pool line to the Seckerton Metering Station.

6. The fourth segment of pipeline is approximately 50 metres of NPS 16 steel pipeline ("**Corunna Pool Line Station Tie-In**") with a maximum operating

pressure of 1 350 psig (9 310 kPa). The Corunna pool line Station Tie-In will connect the existing NPS 16 steel Corunna pool line to the Corunna Metering Station.

7. Together, the pipelines and related station connections comprise the proposed Project that is the subject of this Application.

8. Enbridge hereby applies to the Board pursuant to section 90 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c-15, Sched. B., for an order granting leave to construct the proposed Project. The Project is being completed within lands over which Enbridge currently has land rights and, as such, no new lands are required to complete the Project.

9. Enbridge requests the Board render a decision by March 15, 2011 in order to meet a condition precedent stipulated in a storage contract that underpins this project.

10. The list of interested parties is provided in Exhibit A, Tab 2, Schedule 2.

11. Enbridge requests that copies of all documents filed with the Board in connection with this proceeding be served on it and on its counsel, as follows:

a)	The Applicant:	Regulatory Affairs Enbridge Gas Distribution Inc.
	Address:	500 Consumers Road Toronto, Ontario M2J 1P8
	Mailing Address	P.O. Box 650 Scarborough, Ontario M1K 5E3
	Telephone: Fax: Email:	(416) 495-5499 or 1-888-659-0685 (416) 495-6072 EGDRegulatoryProceedings@enbridge.com
b)	The Applicant's counsel:	Scott Stoll Aird & Berlis LLP
	Address:	Suite 1800, Box 754 Brookfield Place, 181 Bay Street Toronto, Ontario M5J 2T9
	Telephone: Fax: Email:	(416) 865-4703 (416) 863-1515 sstoll@airdberlis.com

DATED: December 17, 2010 at Toronto, Ontario

ENBRIDGE GAS DISTRIBUTION INC.
By its counsel

AIRD & BERLIS LLP

Scott Stoll

LIST OF INTERESTED PARTIES

Landowners, Tenants, and Encumbrancers

Party	Role
1031052 Ontario Limited c/o James R. Elliott 1918 LaSalle Road Sarnia, ON N7T 7H5	Landowner Lot 19, Concession 8 PIN 43298-0068
Blackburn Radio Inc. 1415 London Road Sarnia, ON N7S 1P6	Landowner Lot 22, Concession 9 PIN 43295-0101
James William DeGurse and Stephanie Phyllis DeGurse 1421 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 21, Concession 8 PIN 43298-0065
Matthew Philip Hergott 1685 Petrolia Line Corunna, ON N0N 1G0	Landowner Lot 19, Concession 10 PIN 434295-0092
Antonio Fracalanza and Carla Fracalanza 1366 Blackwell Road Sarnia, ON N7S 5M4	Landowner Lot 21, Concession 8 PIN 43298-0064
Bruce Floyd Knight and Kathleen Sarah Knight 1163 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 19, Concession 10 PIN 43295-0091
Robert Large and Gail Elizabeth Large 1025 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 20, Concession 10 PIN 43295-0087
Jeffrey Kent Larsen and Tracey Ann Larsen 3765 Ladysmith Road, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 22, Concession 8 PIN 43298-0063

Clifford Wayne Lennan 3263 Petrolia Line Petrolia, ON N0N 1R0	Landowner Lot 22, Concession 8 PIN 43298-0061
Lori Jeannette Maidment 1171 Rokeby Line Mooretown, ON N0N 1M0	Landowner Lot 19, Concession 8 PIN 43298-0070
Robert James McClemens and Mary Patrice McClemens 944 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 19, Concession 8 PIN 43295-0098 & PIN 43295-0099
Joseph William Wellington, Margaret Ruth Wellington and Richard James Wellington 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Landowner (Surface Rights) Lot 20, Concession 10 PIN 43295-0088
Henry Edwin Wellington, Joseph William Wellington, Margaret Ruth Wellington and Richard James Wellington 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Landowner (Mineral Rights) Lot 20, Concession 10 PIN 43295-0089
Ann McLaughlin and Thomas Edward McLaughlin 620 Secretariate Drive, Paddock Green Corunna, ON N0N 1G0	Landowner Lot 19, Concession 8 PIN 43298-0067
Thomas Joseph McLaughlin and Joyce Elaine McLaughlin 855 Petrolia Line Corunna, ON N0N 1G0	Landowner / Tenant Farmer Lot 22, Concession 10 PIN 43298-0083
James Moore Jr. 1148 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 19, Concession 9 PIN 43398-0066
1375525 Ontario Limited, c/o Allan and Diane Murray 1067 Rokeby Line Mooretown, ON N0N 1M0	Landowner Lot 20, Concession 8 PIN 43298-0066

Nova Chemicals (Canada) Ltd. c/o Doug Mathany 201 North Front Street P.O. Box 3054 Sarnia, ON N8T 7V1	Landowner Lot 21, Concession 10 (Surface Rights), Lot 22, Concession 10 & Lot 22, Concession 9 PIN 43295-0107 & PIN 43295-0082 and Encumbrancer
Virginia Reutiman 305 East Rice Street P.O. Box 367 Wayzata, MN 55391 U.S.A	Landowner Lot 20, Concession 9 PIN 43295-0096
Linda Louise Valline 11719 S700E, Draper, UT 84020 U.S.A.	Landowner Lot 20, Concession 9 PIN 43295-0096
Garry Arthur Robbins and Mary Patricia Robbins 855 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 22, Concession 8 PIN 43298-0062
Gary Scott Robinson and Rebecca Lynn Campbell 823 Rokeby Line, Mooretown, ON N0N 1M0	Landowner Lot 22, Concession 8 PIN 43298-0060
Kenneth W. Smith and Dorothy Smith 1191 Rokeby Line Mooretown, ON N0N 1M0	Landowner (Life Interest) Lot 19, Concession 8 PIN 43298-0071
Harold Walter Taylor and Gail Diane Taylor 904 Rokeby Line Mooretown, ON N0N 1M0	Landowner Lot 21, Concession 9 PIN 43295-0100
Joseph William Wellington, Margaret Ruth Wellington and Robert Scott Wellington 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Landowner (Mineral Rights) Lot 21, Concession 10 PIN 43298-0086

Pauline Mary Wellington 1020 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 21, Concession 10 PIN 43295-0085
Keith William Wilson, Charlotte Irene Wilson and Thomas William Wilson 894 Petrolia Line Corunna, ON N0N 1G0	Landowner / Tenant Farmer Lot 22, Concession 10 PIN 43295-0084
912176 Ontario Limited c/o Enbridge Gas Distribution Inc. 3595 Tecumseh Road Mooretown, ON N0N 1M0	Landowner Lot 19, Concession 8 PIN 43295-0071 & PIN 43295-0097 And Encumbrancer
Robert Young and Gertrude Young 790 Tudor Close Sarnia, ON N7V 2Z5	Landowner Lot 19, Concession 9 PIN 43295-0093
Union Gas Limited Attn: Lands Department 50 Keil Drive North Chatham, ON N7M 5M1	Landowner Lot 19, Concession 9 PIN 43295-0095 And Encumbrancer
923726 ON Limited c/o Enbridge Gas Distribution Inc. 3595 Tecumseh Road Mooretown, ON N0N 1M0	Encumbrancer
The Corporation of the County of Lambton 789 Broadways Street, P.O.Box 3000, Wyoming, ON N0N 1T0	Landowner Roads
3305911 Canada Inc. c/o Fraser & Beatty (Attn Victor Y. Hum) P.O.Box 100, 1 First Canadian Place, 100 King Street West, Toronto, ON M5X 1B2	Encumbrancer

Helen Margaret Wellington c/o 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Life Interest in Lot 21, Concession 10 PIN 43295-0086 & PIN 43295-0107
Dome NGL Pipeline Ltd. A Subsidiary of BP Canada Energy Resources Attn: Tim McQuire 1182 Plank Road, P.O. Box 216 Sarnia, ON N7T 7H9	Encumbrancer
Interprovincial Pipe Line Inc. c/o Eastern Division, Box 128, Sarnia, ON N7T 7H8	Encumbrancer
Dancy Broadcasting Limited c/o Blackburn Radio Inc. 1415 London Road Sarnia, ON N7S 1P6	Encumbrancer
Patricia Newell 1143 Petrolia Line Corunna, ON N0N 1G0	Encumbrancer
Arthur Battle and Jeanette Battle, c/o 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Life Interest in Lot 21, Concession 10 PIN 43295-0086 & PIN 43295-0107
The Corporation of the Township of St. Clair 1155 Emily Street, Mooretown, ON N0N 1M0	Landowner Roads And Encumbrancer
Hydro One Networks Attn. Mr. Tony Lerullo 483 Bay Street, North Tower, 15th Floor Toronto, ON M5G 2P5	Encumbrancer
Joe Walsh R.R. 1 Mooretown, ON N0N 1M0	Tenant Farmer Lot 21, Concession 8

Jeff Robbins 2968 Tecumseh Road Courtright, ON N0N 1H0	Tenant Farmer Lot 22, Concession 8
Brian Bruton 777 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Tenant Farmer Lot 22, Concession 8
Tim Barkhouse 5208 Telfer Side Road Sarnia, ON N0N 1M0	Tenant Farmer Lot 19, Concession 9
Ollie Smith 3782 Tecumseh Road Mooretown, ON N0N 1M0	Tenant Farmer
David Kells 1417 Moore Line Mooretown, ON N0N 1M0	Tenant Farmer
J-Line Contractors Inc. 60 French Line Port Lambton, ON N0P 2B0	Tenant Farmer
John Grigg R.R. 1 Mooretown, ON N0N 1M0	Tenant Farmer

First Nations

Aamjiwnaang First Nation Attention: Chief Christopher Plain 978 Tashmoo Avenue Sarnia, ON N7T 7H5
Chippewas of Kettle and Stony Point Attention: Chief Elizabeth J. Cloud 6247 Indian Lane R.R.# 2 Forest, ON N0N 1J0
Walpole Island First Nation Attention: Chief Joseph B. Gilbert R.R.# 3 Wallaceburg, ON N8A 4K9

OPCC Members

Ms. Zora Crnojacki Ontario Energy Board P.O. Box 2319 2300 Yonge Street, 26th Floor Toronto, ON M4P 1E4 Tel: (416) 440-8104 Fax: (416) 440-7656 Email: zora.crnojacki@oeb.gov.on.ca
Mr. Oscar Alonso Technical Standards and Safety Authority 3300 Bloor St. W., 14th Floor, Centre Tower Toronto, ON M8X 2X4 Tel: (416) 734-3353 Fax: (416) 231-7525 Email: oalonso@tssa.org
Ms. Donna Mundie Ministry of Agriculture, Food and Rural Affairs 1 Stone Road West, 3rd Floor Guelph ON N1G 4Y2 Tel: (519) 826-3120 Fax: (519) 826-3109 Email: donna.mundie@omafra.gov.on.ca
Mr. Doug Peeling Ministry of Transportation 301 St. Paul Street, 2nd floor Garden City Tower St. Catharines ON L2R 7R4 Tel: (905) 704-2916 Fax: (905) 704-2481 Email: doug.peeling@ontario.ca

Mr. Goran Ciric Provincial Planning Policy Branch Ministry of Municipal Affairs and Housing 777 Bay Street, 14th floor Toronto ON M5G 2E5 Tel: (416) 585-6246 Fax: (416) 585-4245 Email: goran.ciric@ontario.ca
Ms. Renée Bowler Ministry of Natural Resources Team Leader – Environmental Planning Unit 300 Water Street, 5th Floor Peterborough ON K9J 3C7 Tel: (705) 755-5870 Fax: (705) 755-1971 Email: renee.bowler@ontario.ca
Mr. Chris Schiller Manager, Culture Services Unit Ministry of Tourism and Culture 401 Bay Street, Suite 1700 Toronto ON M7A 0A7 Tel: (416) 314-7144 Fax: (416) 314-7175 Email: chris.schiller@ontario.ca
Mr. Martin Graham Director, Real Estate Development Economic Development Real Estate Development Planning 1 Dundas Street West Toronto ON M5G 2L5 Tel: (416) 326-9792 Email: graham.martin@ontariorealty.ca

Mr. Mike Parker Supervisor, APEP Ministry of the Environment – Southwestern Region 733 Exeter Road London ON N6E 1L3 Tel: (519) 873-5043 Email: mike.parker@ontario.ca and/or Mr. Trevor Robak Supervisor, APEP (Acting) Ministry of the Environment – Southwestern Region 733 Exeter Road London ON N6E 1L3 Tel: (519) 873-5115 Email: trevor.robak@ontario.ca
Mr. Dan Panko Supervisor, APEP (Acting) Ministry of the Environment – Central Region 5775 Yonge Street, 9th Floor North York ON M2M 4J1 Tel: (416) 326-3477 Fax: (416) 325-6345 Email: dan.panko@ontario.ca
Ms. Penny Stewart Supervisor, APEP Ministry of the Environment – Eastern Region 1259 Gardiners Road, Unit 3 P.O. Box 22032 Kingston ON K7M 8S5 Tel: (613) 548-6931 Email: penny.stewart@ontario.ca

Attention: Supervisor, APEP Ministry of the Environment - West Central Region 119 King Street West, 12th Floor Hamilton ON L8P 4Y7
Ms. Paula Allen Supervisor, APEP Ministry of the Environment – Northern Region 199 Larch Street, 12th Floor Sudbury ON P3E 5P9 Tel: (705) 564-3273 Fax: (705) 564-4180 Email: paula.allen@ontario.ca

Filed: 2010-12-17
EB-2010-0302
Exhibit A
Tab 3
Schedule 1
Page 1 of 5

PROJECT DESCRIPTION AND JUSTIFICATION

1. Enbridge is planning a series of storage enhancement projects which may culminate in an increase of storage capacity of approximately 17.5 BCF. The first phase of this expansion, targeted for completion in 2011, will enable Enbridge to offer approximately 4.5 BCF of incremental storage service.

2. New storage services are discussed in the OEB's Natural Gas Electricity Interface Review ("NGEIR") proceeding, EB-2005-0551. In the Decision, the OEB indicated that it "will refrain from regulating the rates or approving the contracts for new storage services offered by Union and Enbridge".[1]

3. Enbridge held open seasons in March and November 2010. Enbridge is in the process of finalizing commercial terms for contract(s) for the approximate 4.5 BCF of storage services commencing in 2011.

4. Future open seasons will be held to support development of future capacity.

5. Consistent with the NGEIR Decision, these projects are being funded by Enbridge's shareholders and will not become part of Enbridge's regulated rate base. All costs associated with these projects are being captured in the unregulated accounts and no costs of the project are charged to regulated utility accounts. As such, this Application does not include an economic feasibility analysis and Enbridge is not seeking a finding from the Board related to the financial feasibility of these projects.

[1] Decision with Reason, NGEIR, EB-2005-0551, page 74, November 7, 2006.

6. Enbridge is currently preparing a report on the cost allocation between regulated and unregulated storage services. This report will be filed with the Earnings Sharing Mechanism proceeding scheduled to be filed in March 2011.

7. The first phase of the enhancement project, targeted to be completed in 2011, is comprised of:
   a) the construction of four segments of pipe totaling approximately 3500 metres and related facilities (see Exhibit A, Tab 3, Schedule 2), which is the subject of this application;
   b) the construction of the replacement of the Corunna Gathering Line, which does not require a Leave To Construct application; and
   c) the first stage of delta pressuring of the Corunna and Seckerton natural gas storage pools, which does not require an application.

Dow Moore, Corunna and Seckerton Pipeline Project

8. The Dow Moore, Corunna and Seckerton Pipeline Project is a Leave to Construct Application comprising the addition of four short segments of pipeline.

9. The first segment of pipeline Enbridge is applying for Leave to Construct is approximately 1900 metres of NPS 20 steel pipeline (“Interconnect Pipeline”) with a maximum operating pressure of 1 700 psig (11 730 kPa). The Interconnect Pipeline will connect to the existing Dow Moore Pool Line via a new metering station (“Dow Moore Metering Station”), and then to two metering stations at the Seckerton and Corunna storage reservoir sites (“Seckerton Metering Station” and “Corunna Metering Station”, respectively). This pipeline is required to deliver and take away gas in the operating pressure range of between 325 to 1 600 psig (2 240 to 11 030 kPa), to and from the Seckerton, Corunna or Dow Moore storage reservoirs, and the Corunna Compressor Station.

10. The second segment of pipeline Enbridge is applying for Leave to Construct is approximately 1500 metres of NPS 20 steel pipeline ("Seckerton Gathering Line") with a maximum operating pressure of 1 700 psig (11 730 kPa). This pipeline will connect to the gas wells in the Seckerton storage reservoir through new lateral connections, and the pipeline will tie-in to the Seckerton Metering Station. This pipeline is required to deliver and take away gas in the operating pressure range of between 325 to 1 600 psig (2 240 to 11 030 kPa) to and from the Seckerton, Corunna or Dow Moore storage reservoirs, and the Corunna Compressor Station.

11. The third segment of pipeline Enbridge is applying for Leave to Construct is approximately 50 metres of NPS 20 steel pipeline ("Seckerton Pool Line Station Tie-In"), with a maximum operating pressure of 1 700 psig (11 730 kPa). The Seckerton Pool Line Station Tie-In will connect the existing NPS 20 steel Seckerton pool line to the Seckerton Metering Station. This pipeline is required to deliver and take away gas in the operating pressure range of between 325 to 1 600 psig (2 240 to 11 030 kPa) to and from the Seckerton, Corunna or Dow Moore storage reservoirs, and the Corunna Compressor Station.

12. The fourth segment of pipeline Enbridge is applying for Leave to Construct is approximately 50 metres of NPS 16 steel pipeline ("Corunna Pool Line Station Tie-In") with a maximum operating pressure of 1 350 psig (9 310 kPa). The Corunna pool line Station Tie-In will connect the existing NPS 16 steel Corunna pool line to the Corunna Metering Station. This pipeline is required to deliver and take away gas in the operating pressure range of between 325 to 1 200 psig (2 240 to 8 270 kPa) to and from the Corunna, Seckerton and Dow Moore storage reservoirs, and the Corunna Compressor Station.

13. In 2010, an Environmental and Socio-Economic Impact Assessment ("ER") was completed by an independent environmental consultant, Stantec Consulting Ltd. ("Stantec") for the proposed pipeline segments.

14. The proposed routes and locations for the proposed facilities for the Dow Moore, Corunna and Seckerton Pipeline Project are on lands either owned by Enbridge or where Enbridge holds gas storage leases; or on lands subject to gas storage rights as provided by OEB Order E.B.O. 5, December 2, 1963. These routes and locations were recommended by Stantec.

15. Due to the short length of the proposed pipeline segments, there are a limited number of affected landowners and thus, no formal public information sessions have been held. Enbridge has met and will continue to engage the affected landowners as appropriate throughout the project.

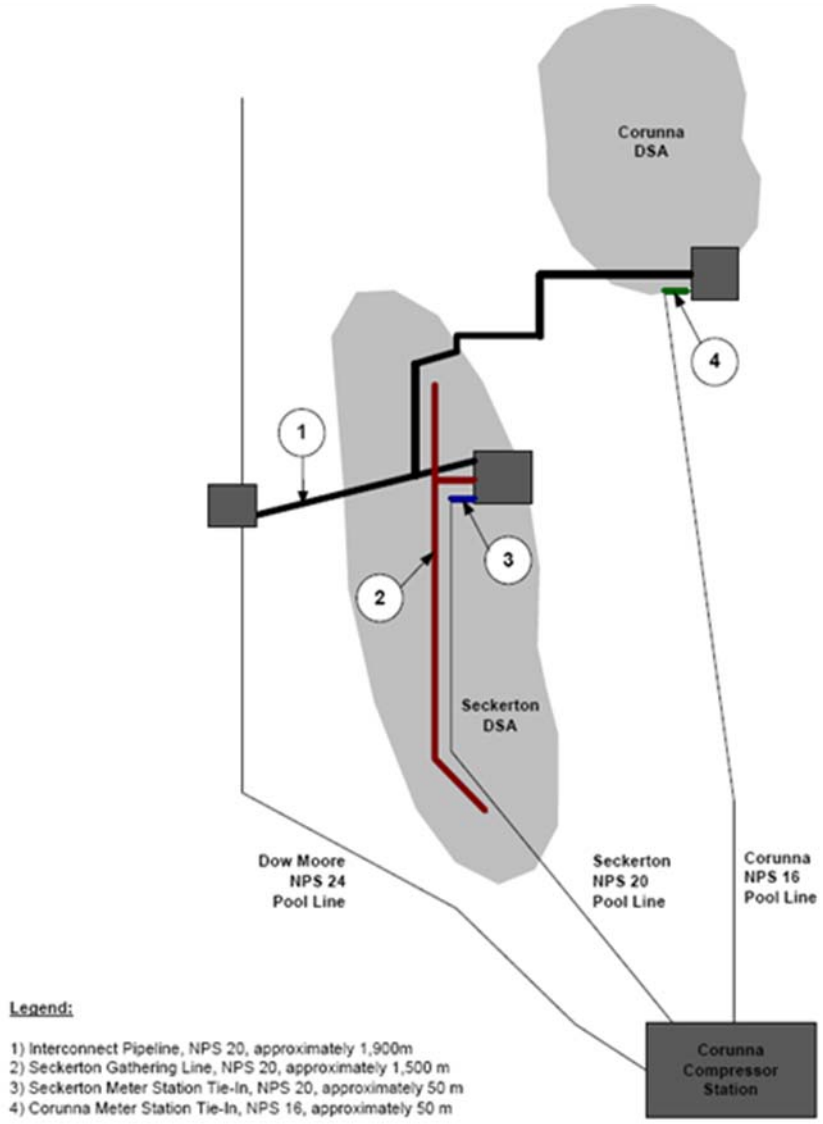
16. Stantec's ER report has been issued to the Ontario Pipeline Coordinating Committee ("OPCC") for their review as part of the Board's Leave to Construct process. An addendum will be filed with the OPCC and is included in this Application.

17. A schematic drawing of the Dow Moore, Corunna and Seckerton Pipeline Project is shown below in Figure 1.

18. The Aerial Photograph, in the ER, Exhibit B, Tab 2, Schedule 2, Figure 4, illustrates the Dow Moore, Corunna and Seckerton Pipeline Project.

Figure 1

DOWMOORE, CORUNNA AND SECKERTON PIPELINE PROJECT SCHEMATIC DRAWING



Legend:

1) Interconnect Pipeline, NPS 20, approximately 1,900m
2) Seckerton Gathering Line, NPS 20, approximately 1,500 m
3) Seckerton Meter Station Tie-In, NPS 20, approximately 50 m
4) Corunna Meter Station Tie-In, NPS 16, approximately 50 m

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EB-2010-0302
Exhibit B
Tab 1
Schedule 1
Page 1 of 3
Plus Attachment

ROUTE SELECTION

1. The project involves approximately:
   a) 1,900 metres of NPS 20 of Interconnect Pipeline;
   b) 1,500 metres of NPS 20 Seckerton Gathering Line;
   c) 50 metres of NPS 20 Seckerton Pool Line Station Tie-In; and
   d) 50 metres of NPS 16 Corunna Pool Line Station Tie-In.

2. Stantec conducted a detailed route selection for the Interconnect Pipeline which is documented in the Preferred Route Description below. For the Seckerton Gathering Line the installation will be on lands owned by Enbridge or where Enbridge has gas storage rights as provided by OEB Order E.B.O. 5, December 2, 1963. Due to the directness of the alignments in the existing corridor, Stantec did not identify comparable alternatives other than within or adjacent to the existing corridor route. Also, a detailed route selection was not required for the Seckerton Pool Line Station Tie-In or the Corunna Pool Line Station Tie-In due to the short length and limited routing options.

Preferred Route Description of the Interconnect Pipeline

3. In determining the preferred route for the Interconnect Pipeline, Stantec assessed two distinct routes. These route alternatives, referenced as route 1A and 1B, are described in the ER found in Exhibit B, Tab 2, Schedule 2, specifically in Figure No. 4 and the literature that follows.

4. Of the routes examined, route 1A was identified by Stantec as the Preferred Route for the Interconnect Pipeline. Route 1A was selected as it does not travel adjacent to, or within, the existing Hydro One corridor that also contains other existing utilities.

Hydro One communicated its requirements for pipeline construction and operation to Stantec in an email dated October 26, 2010, copied here as Attachment 1. Enbridge supports and adopts the findings made by Stantec and has accordingly approved route 1A as the Preferred Route for the Interconnect Pipeline.

5. The Preferred Route for the Interconnect Pipeline is described as follows:
    - The west end point of the Interconnect Pipeline is the connection to the existing Dow Moore Pool Line via a tie-in to the Dow Moore Metering Station;
    - The pipeline would then proceed easterly to connect to the Seckerton storage reservoir via a tie-in to the Seckerton Metering Station, a distance of approximately 460 meters;
    - The pipeline would then proceed with multiple northerly and easterly jogs to connect to the Corunna storage reservoir via a tie-in to the Corunna Metering Station, a total distance of approximately 1,440 metres to the easterly end point of the Interconnect Pipeline.

6. The preferred route presented through the agency contact letter released on October 14, 2010, included in the ER as found in Exhibit B, Schedule 2, Tab 2, is route 1A.

7. The Interconnect Pipeline will be installed on agricultural lands and woodlots either owned by Enbridge; or where Enbridge holds gas storage leases; or where Enbridge has gas storage rights as provided by OEB Order E.B.O. 5, December 2, 1963, in coordination with the following entities:

    - St. Clair Regional Conservation Authority
    - Ministry of Environment
    - Ministry of Culture

- Ministry of Transportation
- Ministry of Natural Resources
- Former Township of Moore in the Township of St. Clair
- Hydro One
- Bell

Edwin Makkinga

From: Thurtell, Steve [steve.thurtell@stantec.com]
Sent: Monday, December 06, 2010 10:37 AM
To: Edwin Makkinga
Subject: FW: Dow Morre, Seckerton and Corunna Interconnect Pipeline Project Class EA

Hi

From: HanmengJen.Long@HydroOne.com [mailto:HanmengJen.Long@HydroOne.com]
Sent: Tuesday, October 26, 2010 10:44 AM
To: Thurtell, Steve
Cc: Leslie.Koch@HydroOne.com; ierullo@HydroOne.com
Subject: Dow Morre, Seckerton and Corunna Interconnect Pipeline Project Class EA

Dear Mr. Thurtell,

In our initial review, we have confirmed that Hydro One Transmission facilities are located within immediate vicinity of the proposed site in your study area. Please allow appropriate lead-time in your project schedule in the event that proposed development impacts Hydro One infrastructure which requires relocation or modifications, or needs an outage, that may not be readily available.

In planning, please note that developments should not reduce line clearances and limit access to our facilities at any time in the study area of your Proposal. Any construction activities must maintain the electrical clearance from the transmission line conductors as specified in the Ontario Health and Safety Act for the respective line voltage.

The integrity of the structure foundations must be maintained at all times, with no disturbance of the earth around the poles, guy wires and tower footings. There must not be any grading, excavating, filling or other civil work close to the structures.

Note that existing rights of ways may have provisions for future lines or already contain secondary land uses (i.e. pipelines, water mains, parking, etc). Please take this into consideration in your planning.

Once details are known and it is established that your development will affect Hydro One facilities including the rights of way, please submit plans that detail your development and the affected Hydro One facilities to:

Kent Taylor, Hydro One Real Estate Management
185 Clegg Road, Markham L6G 1B7
Phone: (905) 946-6230, Fax: (905) 946-6287
kent.taylor@hydroone.com

Please note that the proponent will be responsible for costs associated with modification or relocation of Hydro One facilities, as well as any added costs that may be incurred due to increase efforts to maintain our facilities.

Regards,

Jen Long
Transmission Lines Sustainment
System Investment, Asset Management
Hydro One Networks Inc.
Tel: 416-345-4421
HanmengJen.Long@HydroOne.com

Filed: 2010-12-17
EB-2010-0302
Exhibit B
Tab 1
Schedule 2
Page 1 of 1

ALTERNATIVE ROUTE

1. As indicated in Exhibit B, Tab 1, Schedule 1, an alternative route has been established for the Interconnect Pipeline only.

2. In addition to the Preferred Route for the Interconnect Pipeline, Stantec assessed one distinct route alternative denoted route 1B in the ER, which is filed at Exhibit B, Tab 2, Schedule 2. A map showing the route of the location of the alternative route 1B is provided in Figure 4, Section 4.1 of the ER. The final route for the Interconnect Pipeline was selected as the preferred route over the alternative because it does not travel adjacent to the Hydro One corridor or other existing utilities within that corridor. Correspondence between Hydro One and Stantec detailing this preference is filed as Attachment 1 in Exhibit B, Tab 1, Schedule 1.

3. Alternative route 1B proceeds east from the existing Dow Moore Gathering Pool Line for approximately 1,150 metres along the edge of an existing woodlot and then heads north for approximately 700 metres to tie-in to the existing Corunna Gathering Line.

ENVIRONMENTAL IMPLEMENTATION PLAN

1. Construction will be conducted in accordance with the Enbridge Contract Specifications, the Enbridge Construction Manual, and the recommendations in the Environmental Report: Dow Moore, Corunna and Seckerton Pipeline Project. This 2010 study was prepared by Stantec Consulting Ltd. ("Stantec") and can be found in Exhibit B, Tab 2, Schedule 2. An addendum dated December 16, 2010, from Stantec has been added and can be found in Exhibit B, Tab 2, Schedule 3. Any additional requirements resulting from the final permitting, discussion with the Ministry of Natural Resources, or the Board's Conditions of Approval will be incorporated into the Environmental Implementation Plan where necessary.

2. The Environmental Implementation Plan will incorporate recommended mitigation measures for the environmental issues and concerns associated with the proposed works. This will be communicated to the construction contractor prior to the start of construction. A qualified Environmental Inspector will be available to assist the Project Manager in ensuring that environmental conditions contained in the Board's Conditions of Approval are followed, and that commitments made to the agencies are honoured. The Environmental Inspector and contractor will also ensure that unforeseen environmental circumstances that arise before and during construction are appropriately addressed.

3. Through the use of the procedures outlined above, it is expected that environmental impacts resulting from construction of the proposed works will be negligible.

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EB-2010-0302
Exhibit B
Tab 2
Schedule 2
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DOW MOORE, CORUNNA AND SECKERTON PIPELINE PROJECT

ENVIRONMENTAL REPORT

File No 160960611
November 2010

Prepared for:

Enbridge Gas Distribution Inc.
500 Consumers Road
North York, ON, M2J 1P8

Prepared by:

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph, ON N1G 4P5

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1.0 Introduction

Stantec Consulting Ltd. (“Stantec”) has been retained by Enbridge Gas Distribution Inc. (EGDI), to prepare an Environmental and Socio-Economic Assessment Report (ER) for a Project involving approximately 3, 500 meters (m) of buried natural gas pipelines south of Sarnia, Ontario. The construction project proposed by EGDI is named the Dow Moore, Corunna and Seckerton Pipeline Project (“the Project”). The Project is part of the ongoing expansion of the natural gas storage system in St. Clair Township, and is required to meet increasing demand for natural gas storage service in the area. In preparing this report, Stantec consulted with EGDI staff.

The Project comprises two pipelines and two small tie-in sections of pipe. The first pipeline involves a gathering pipeline, approximately 1,500 m long and 20 inch (508 millimeter; mm) in diameter within the Seckerton pool. The second pipeline involves approximately 1,900 m of 20 inch diameter steel pipeline to connect the existing Dow Moore pool line to two metering stations at the Corunna and Seckerton natural gas storage pools. Also, the first small section is approximately 50 m of 20 inch diameter steel pipeline to tie-in the Seckerton pool line to the metering station at the Seckerton natural gas storage pool. Finally, the second short section is approximately 50 m of 16 inch diameter steel pipeline to tie-in the Corunna pool line to the metering station at the Corunna natural gas storage pool. This ER was created to meet the requirements of the Ontario Energy Board’s (“OEB”) Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon pipelines and facilities in Ontario (May 2003).

A Study Area surrounding the Project has been identified within the area west of Tecumseh Road, south of Petrolia Line, and contained with the area approximately 600 m south of Rokeby Line, and 500 m west of Ladysmith Road, as shown on Figure 1. The properties screened to locate existing environmental features are within Lambton County in Moore Township, on Lots 19, 20, 21 and 22 in Concessions 8, 9 and 10.

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374800 379800 384800 389800 394800 399800 404800

4760000 4755000 4750000 4745000 4740000

Sarnia
Corunna
Courtright
Brigden
USA

St. Clair River
Bear Creek

MICHIGAN AVE
ROSEDALE AVE
OAKDALE AVE
EXMOUTH ST
ELGIN ST
GEORGE ST
DAVIS ST
DEVINE ST
CAMPBELL ST
ST ANDREW ST
CLIFFORD ST
IMPERIAL AVE
WILLIAMS DR
RIVER RD
SUN AVE
VIDAL ST
VIDAL ST S
TASHMOO AVE
DEGURSE DR
SCOTT RD
INDIAN RD S
SIDERD MCGREGOR
GLADWISH DR
MODELAND RD
TRUDEAU DR
FINCH DR
MURPHY RD
ECHO RD
VENETIAN BLVD
FRONT ST N
E ST N
LONDON RD
GERMAIN ST
OAK AVE
QUINN DR
AIRPORT RD
TELFER RD
JACKSON RD
HWY 402
O'BRIEN RD
FLEMING RD
LONDON LINE
CONFEDERATION LINE
SIDERD BLACKWELL
BRIGDEN RD
FAIRWEATHER RD
PLOWING MATCH RD
CAMLACHIE RD
CHURCHILL LINE
MARSHALL RD
WATERWORKS RD
LA SALLE LINE
CTR ST
KETTLE LANE
CAROLINE ST
GARFIELD AVE
MAUDE ST
PAGET ST
HILL ST
ALBERT BLVD
BERES RD ST
POLYMOORE DR
PETROLIA LINE
PLANK RD
MANDAUMIN RD
TECUMSEH RD
LADYSMITH RD
KIMBALL RD
ROKEBY LINE
MARTHAVILLE RD
EMILY ST
MOORE LINE
SHILOH LINE
MAIN ST
GREENFIELD RD
WAUBUNO RD
COURTRIGHT LINE
JANE ST
ST CLAIR PKY
OIL SPRINGS LINE
HWY 40
TILE YARD RD

Legend

- Study Area
- Highway
- Major Road
- Local Road
- Waterbody
- Railway
- Watercourse

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © ESRI, 2008.
3. Image Sources: © St. Clair Region Conservation Authority, 2006 - Imagery Date: 2006.

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1:100,000

Stantec

November 2010
160960611

Client/Project
ENBRIDGE GAS DISTRIBUTION INC.
DOW MOORE, CORUNNA AND SECKERTON
PIPELINE PROJECT

Figure No.
1

Title
PROJECT LOCATION

W:\active\60960611\drawing\GIS\MXD\60960611_Fig_1_0_ProjectLocation_20101116_DH.mxd

1.1 PURPOSE AND ORGANIZATION OF THE REPORT

Companies planning to construct and operate natural gas pipelines in Ontario must comply with the guidelines established by the Ontario Energy Board (OEB) when seeking Leave to Construct approval. Companies may apply for a Leave to Construct, or make a *Request for Exemption* to the OEB under the appropriate sections of the *Ontario Energy Board Act, 1998*. Applications to the OEB must include information that allows the OEB to make an informed decision, including:

- Engineering design and construction plans for proposed pipelines;
- An Environmental Report (ER) including a route evaluation study and mitigation plans in support of the Application; and,
- Easement acquisition, and landowner and tenant relations considerations.

In order to fulfill these criteria the information presented in this ER has relied on technically sound and consistently applied procedures that are replicable and transparent.

This report provides documentation of the environmental activities undertaken for development of the proposed buried pipelines. The report is organized into seven sections:

- Section 1 describes the proposed facilities, the approval process and the role of the ER;
- Section 2 describes the study methodology and landowner activities;
- A description of the Study Area and an overview of the environmental and socio-economic features and conditions is provided in Section 3;
- The net environmental and socio-economic effects and proposed construction practices, timing and mitigation methods for the proposed project are described in Section 4;
- Cumulative effects of the proposed project are addressed in Section 5;
- Section 6 presents overall study conclusions;
- Section 7 presents the Bibliography;
- Landowner contacts are provided in Appendix A;
- Agency contacts are provided in Appendix B; and
- Stage 1 Archaeology is provided in Appendix C.

1.2 OBJECTIVES OF THE ENVIRONMENTAL REPORT

The primary objective of this ER is to ensure environmental protection during construction and operation of the proposed pipelines, and at the same time meet the intent of the OEB's *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, Fifth Edition* (2003) (the OEB Environmental Guidelines). To meet these objectives, the ER:

- Identifies existing environmental features that could be affected by the Project;
- Identifies environmentally acceptable routes for the proposed pipelines;
- Identifies stakeholder interests (including regulatory and landowner issues) and appropriate mitigation measures to ensure concerns raised by interested parties are addressed; and,
- Establishes the mitigative and/or protective measures required to avoid or minimize potential environmental effects associated with construction and operation of the Project.

In addition, this environmental study considered relevant municipal and provincial guidelines and regulations. The documents reviewed included:

- The Ontario Ministry of Natural Resources (MNR) Provincial Policy Statement, which include interests in wetlands, mineral aggregate resources, and preservation of agricultural lands;
- The Ministry of the Environment's technical mandate derived from the Environmental Protection Act, and the Ontario Water Resources Act;
- The St. Clair Region Conservation Authority's jurisdiction under the Conservation Authorities Act (CAA) pertaining to the *Fill, Construction and Alteration of Waterways* regulation.

Appendix A contains an Agency Contact List and a Summary Table of Agency Correspondence undertaken by Stantec.

1.3 APPROVAL PROCESS AND REGULATORY REQUIREMENTS

In order to obtain approval to construct a pipeline, proponents must submit an application to the OEB that establishes that the Project is in the public interest. As a regulatory body, the OEB must be assured that the Project sponsors meet all standards and regulations relating to both the protection of the environment and public health and safety.

This ER is consistent with the OEB Environmental Guidelines, which should be considered when applicants, such as EGDI, seek approval from the OEB. The OEB Environmental Guidelines are applicable to transmission pipelines, underground storage pools and ancillary facilities. The OEB Environmental Guidelines provide direction as to the content of the ER with respect to the Project description, environmental and socio-economic descriptions, environmental impact assessment, and mitigation. Other requirements of the OEB Environmental Guidelines include compliance and effects monitoring programs, specific mitigation and contingency plans for implementation during construction, and public participation throughout the planning process.

Once completed, the ER is circulated or made available to the Ontario Pipeline Coordinating Committee (OPCC), other federal and municipal government agencies, interest groups, landowners, and other interested parties for their review and comment prior to a hearing before the OEB.

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2.0 Environmental Study and Public Participation Process

2.1 ENVIRONMENTAL STUDY PROCESS

The study was initiated by EGDI during the summer of 2010. The report was completed in November 2010. Subsequently, the ER will be submitted to the OPCC and filed with the OEB as part of EGDI's application.

2.1.1 Public Involvement

Throughout the Project, including the planning and construction phases, inquiries from the general public have been and will continue to be adressed by EGDI in a timely manner. EGDI will implement a complaint tracking system to ensure that all communications are logged and addressed.

The activities of this pipeline Project are confined to a few privately owned properties. As such, no formal public information sessions have been held. All of the directly affected landowners within the Study Area have been and will continue to be informed by EGDI; the remaining landowners have been contacted by EGDI previous to and will be contacted throughout the Project. Also, the landowners within the Study Area have been consulted by Stantec during the collection of environmental information for the Environmental Assessment (EA), the results of which are presented and discussed in Section 2.1.2 of this ER.

During the proposal presentation to landlowners and construction phase of the Project, all landowners within the Study Area have and will continue to have an open communication with EGDI including opportunities to comment. Communications with the Study Area landowners regarding development of the Project commenced with the onset of the Project in 2010 and will continue into the Operation phase of the Project.

The Study Area landowners and the greater public will also have access to review of Environmental Reports and OEB application components. Issues will be included in the implementation of EGDI's complaint tracking system.

2.1.2 Directly Affected Landowner Input

Communication activities conducted in 2010 include personal contacts between EGDI staff and directly affected landowners, and written communication including an information collecting questionnaire from Stantec to all landowners within the Study Area.

EGDI has met and will continue to meet with the landowners directly affected by the Project. EGDI has communicated and will continue to communicate with other landowners who are adjacent to the work area to inform them of the Project.

EGDI has met with the directly affected landowners to inform them of the proposed activities and will discuss the construction activities associated with access roads, transmission lines and gathering lines now that the preferred route has been identified. The landowners had the opportunity to comment on EGDI's proposal and any concerns identified have been addressed in the mitigation section of this report. Examples of concerns raised at these meetings include: the routing of pipelines, construction scheduling, access roads, field tiles, topsoil stripping, compensation and procedure for abandoning pipelines. EGDI will address these issues by hiring a tile consultant to meet with the landowners, prepare tile plans if necessary and stripping topsoil as requested by the landowner.

Stantec requested environment related input from all landowners in the Study Area through an introductory letter and questionnaire. Thirty packages were mailed and to-date nine responses have been received. Five of those returned indicated that they did not want their comments to be on the public record. Concerns raised in the other four returned questionnaires include: tile drains, woodlots, location and size of metering stations, compensation and the long-term plans of EGDI. Each comment was appropriately addressed and responses were logged as displayed in Appendix A.

Interested Parties will be informed of the application to the OEB and will have the opportunity to participate in the hearing as directed by the OEB.

To ensure that all landowner issues are dealt with appropriately, the owners of directly affected lands as well as adjacent landowners will have contact information for EGDI personnel in the event there are concerns or complaints. EGDI will also have a complaint tracking system to ensure that complaints are documented and resolved as quickly as possible.

2.1.3 Agency and Interest Group Contacts

Initially, Government Agencies and interest groups were provided the opportunity to comment on the development of the ER via a project introduction letter. Both the Agency Contact List and the letter are provided in Appendix B. Communications with agencies and stakeholders are summarized in a table in Appendix B. Where appropriate, communications with Agencies were continued by telephone correspondence, email, and facsimile to gather and/or clarify information regarding the Project.

2.1.4 On-Going Consultation Activities

It is recommended that public consultation be continued throughout the planning and development phases of this Project. EGDI will continue to consult with affected landowners throughout the construction and operation phases of the Project and implement a complaint tracking system. EGDI should continue to meet with government agencies, members of the public, and landowners as appropriate.

3.0 Environmental Features

3.1 HISTORY AND DESCRIPTION OF AREA

One of the native bands common to Ontario is the Chippewa First Nation. The people of the Chippewa First Nation that live around Sarnia, Ontario are the Aamjiwnaang First Nation. Historically, they lived along the St. Clair River and continue to live near Corunna, Ontario.

Europeans settled in Corunna, the closest town to the Study Area, in the early 1820's and an agricultural community became established. East of Corunna are the Towns of Petrolia and Oil Springs, Ontario. That is where the world's oil industry started when the first commercial oil well was established in 1858. Ontario's first commercial natural gas well was drilled in Essex County near Leamington, Ontario in 1889 and natural gas was realized in Lambton County soon after. During World War II, the Sarnia area became a large processing centre for oil from Alberta. This petrochemical industry continues in the area. Lambton also possesses a large share of the Province's underground storage capacity for natural gas and other hydrocarbons in the underlying pools.

Today, with 125,000 residents, the County of Lambton continues to be dominated by rural land uses. There are also local communities and a significant industry presence in the petrochemical and other industrial sectors.

The woodlots in the area are small remnants of the northern limit of Canada's Carolinian forest and are scattered across the relatively flat landscape typical for this area of south western Ontario. The larger woodlots comprise several of the natural areas. The Lambton County Official Plan (OP) identifies ten Significant Natural Areas in the former Township of Moore:

1. Bear Creek Woodlot #3
2. Bickford Woods
3. Burton Drain Woodlot
4. Clay Creek Woodland
5. Crown Game Reserve
6. Plum Creek #1
7. Plum Creek Woods Heronry
8. Stag Island
9. Vulture Woods
10. Waubuno Woodlot.

The Significant Natural Area closest to the Study Area is the Burton Drain Woodlot. It is a provincially significant wetland (PSW) approximately 2 km from the Study Area. The wetland is formed by isolated pockets of standing water that are not connected to the Study Area. The next closest Significant Natural Area is approximately 5 km from the Study Area it is the Crown Game Reserve. Due to the separation distance between the PSW, the game reserve and the Study Area, the shallow nature of excavations common to pipeline construction and the presence of numerous intercepting road ditches between them, no impacts to these Significant Natural Areas are anticipated.

The properties west of the Study Area are identified in the OP as Petrochemical Industrial Land. Approximately 1 km west of the Study Area is a Nova Chemicals Bulk Terminal. As well, there are numerous other industrial facilities in the greater area.

3.2 THE STUDY AREA

The boundaries of the Study Area were established by considering the location of the tie-in points for the Dow Moore gathering pipeline and the Corunna storage pool and those of the two other pipelines in this project. The start and finish tie-in points for the proposed pipelines are within the Study Area. It is located approximately 3.5 km east of the Town of Corunna, Ontario. The Study Area for the EA of the proposed pipeline project is located on Lots 22, 21, 20 and 19, Concessions 8, 9 and 10 in St. Clair Township, Lambton County.

The Study Area is located within the Lake Erie Counties Climatic Region. Lands within the Study Area are predominantly utilized for agriculture. Non-agricultural land uses include natural gas and/or oil infrastructure.

Many of the farms in the area have woodlots at the back, along the middle of the concession blocks. The OP states that the Significant Woodlots are those located in a Primary Corridor or Significant Natural Area designations, or any contiguous forested area that is 4 hectares, or greater in size. In the OP, the woodlots in the Study Area are not along Primary Corridors or Significant Natural Areas. They are divided by clearings along lot lines and existing corridors. The OP identifies Natural Heritage Systems. There is a Natural Heritage Corridor listed as a Primary Corridor in the Study Area. It is along the municipal drain, McClemmens Drain, which can be seen on the Environmental features Map Figure 2.

The St. Clair Region Conservation Authority (SCRCA) has identified the drains and rivers in the area as Regulated lands under the ‘Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” Regulation passed pursuant to Section 28 of the Conservation Authorities Act, R.S.O. 1990, Ch. 27. That Regulation prohibits the placement or dumping of fill, construction of a building or structure in the floodplain or alteration to a watercourse without prior written approval of that Authority. This is discussed further in Section 4.3.5.1.

Surficial geological deposits within the Study Area have been mapped as glaciolacustrine deep-water silt and clay deposits. Poorly drained Brookston and Caistor clay soils have developed on these glaciolacustrine deposits. The location of the soils are shown on the Agricultural features Map, Figure 3

The Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC) database search identified a number a species that could potentially be found living in or crossing through the Study Area. To refine this list it was forwarded to the MNR for verification of presence of habitat. This is discussed further in Section 4.5.6

A Stage 1 Archaeological Assessment was conducted along the proposed routes. It is discussed in Section 4.5.5 and provided in Appendix C.

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384800 389800

4750000 4745000

HILL ST
PETROLIA LINE
HWY 40
LADYSMITH RD
TECUMSEH RD
KIMBALL RD
POLYMOORE DR
ROKEBY LINE
McClemen's Drain

3401714 3401713 3401712 3401711 3401710
3408397
3404549
3408273 3408288
3401675 3401674 3404550
3403266
3404962 3407038 3403675
3401590 3401588
3401589
7143791

N

0 250 500 m
1:24,000

Legend

- Study Area
- Railway
- Watercourse
- Water Well Borehole (MOE)
- Waterbody
- Provincially Significant Wetland
- Wood Lot
- SCRCA- Regulation Limit

Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © ESRI, 2008.
3. Image Sources: © St. Clair Region Conservation Authority, 2006 - Imagery Date: 2006.

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November 2010
160960611

Client/Project
ENBRIDGE GAS DISTRIBUTION INC.
DOW MOORE, CORUNNA AND SECKERTON PIPELINE PROJECT

Figure No.
2

Title
ENVIRONMENTAL FEATURES MAP

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3.3 DATA SOURCES AND MAPPING

Information provided by Agencies, landowners, and other stakeholders was considered to identify the affects of sensitive or unique environmental and socio-economic features. Information provided by interested parties was also considered to develop potential protective and mitigative measures for implementation during construction of the Project.

The base for the Study Area maps (Figures 2, 3 and 4), has been generated from SCRCA imagery , 2006.

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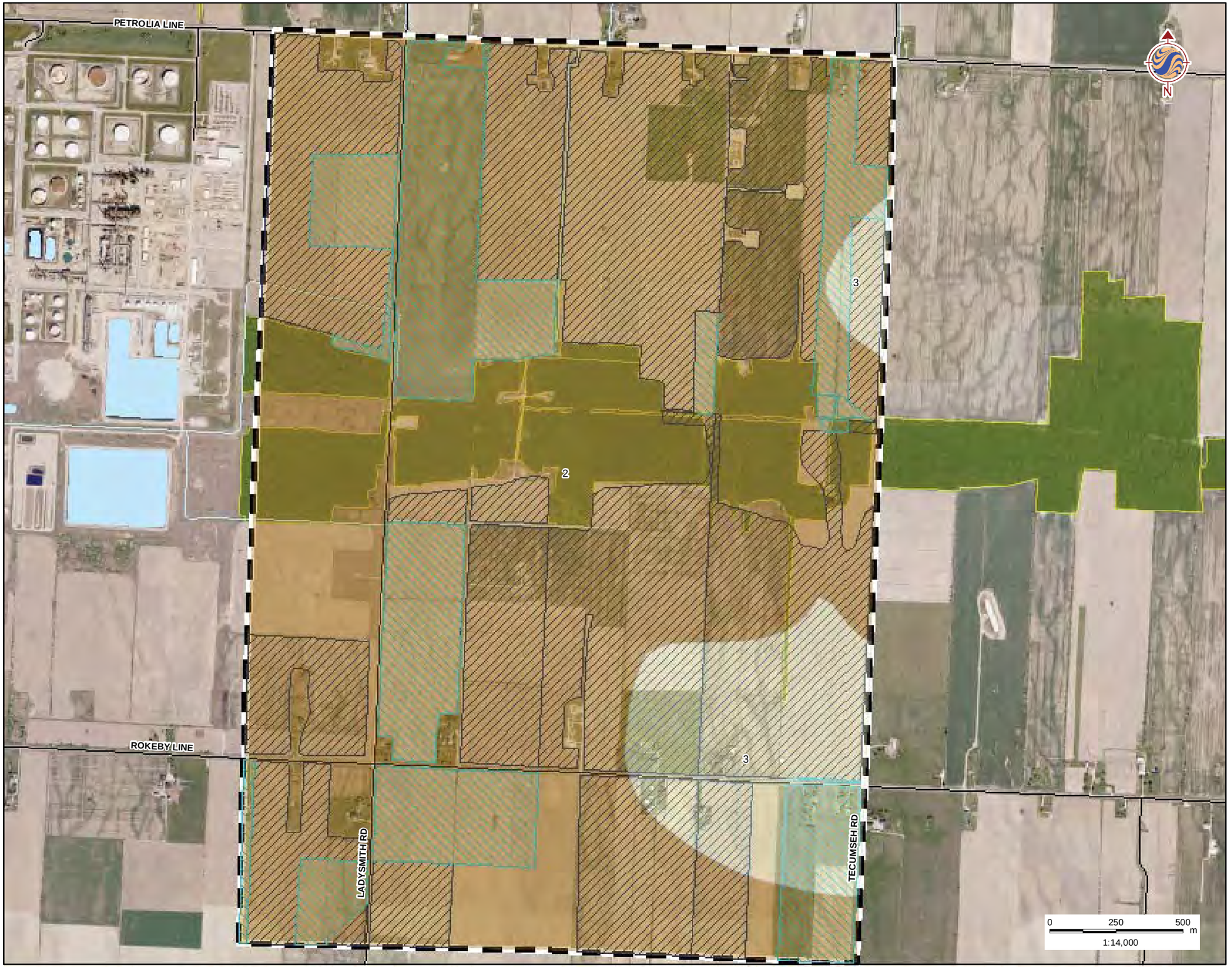


Legend

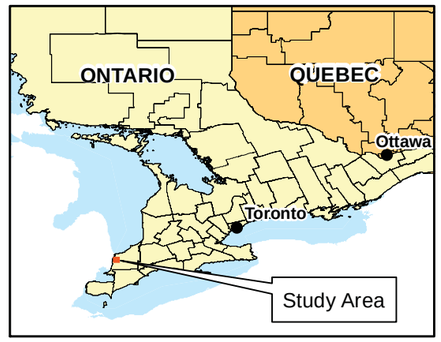
- Study Area
- Highway
- Road
- Railway
- Watercourse
- Waterbody
- Wood Lot

Tile Drainage

- Random
- Systematic

Soil Types

- 2 BKN- Brookston Clay (CLI2)
- 3 CTR- Caistor Clay (CLI3)



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © ESRI, 2008.
3. Image Sources: © St. Clair Region Conservation Authority, 2006 - Imagery Date: 2006.

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DOW MOORE, CORUNNA AND SECKERTON PIPELINE PROJECT

Figure No.
3

Title
AGRICULTURAL FEATURES MAP

W:\active\60960611\drawing\GIS\MXD\60960611_Fig3_AgriculturalFeatures_20101124_DH.mxd

4.0 Pipeline Environmental Management Plan

This section provides discussion on the selection of the routes and an overview of the proposed construction. It discusses the physical, agricultural, socio-economic and biophysical features that occur relating to the potential routes; describes the potential impacts of construction and operation of the proposed pipelines on those features; and recommends mitigation measures to minimize potential negative effects. This section also identifies opportunities to minimize potential impacts to environmental and socio-economic features along, or in close proximity to, the proposed pipeline routes. Specific construction methods and timing are also recommended to minimize potential impacts.

4.1 ROUTE SELECTION

The purposes of the proposed pipelines are 1) to construct an interconnect line (1,900 m) to link the existing Dow Moore gathering pipeline with the Seckerton and Corunna natural gas gathering pipelines and metering facilities and 2) to construct a new gathering line for the Seckerton Pool (1,500 m). In order to determine the most suitable locations for the proposed pipelines the following factors were considered: length of pipeline route; and the presence of existing environmental or agricultural features which may pose a constraint; and the potential for environmental or agricultural impacts. The primary method of mitigation used against identified constraints was avoidance. Environmental features identified during this EA have been avoided where possible. Where avoidance was not feasible, mitigation measures have been developed to the extent possible. In order to minimize the impact on agricultural fields, agricultural infrastructure and disruptions to cropping patterns, the preferred routes have been located, within existing corridors, adjacent to field edges and/or away from existing infrastructure on agricultural lands. The location of the proposed pipeline routes are illustrated on Figure 4.

To determine the environmentally preferred route for the interconnect pipeline that joins the Dow Moore pool pipeline with the Seckerton and Corunna gathering pipelines and metering stations, two potentially viable routes were identified, 1A and 1B of Figure 4. Each route, 1A and 1B, was assessed considering the potential for impacts to the surrounding features. The Project also includes two small joining segments, approximately 50 m long, to tie-in the Seckerton pool line to the metering station at the Seckerton natural gas storage pool, and to connect the Corunna pool line to the metering station at the Corunna natural gas storage pools.

The lengths of routes 1A and 1B are the same approximate length, 1.9 km long. Both routes avoid the municipal drainage systems as identified by the SCRCA and the Primary Corridor – Natural Heritage Corridor as identified by the County of Lambton. The routing length within woodlots is less than a 5% difference, 1A = 435 m and route 1B = 458 m. As well, both routes have been located along field edges or other topographical features.

A preference for Route 1A has been identified, based on the facts that route 1B travels adjacent to an existing Hydro One corridor and Hydro One has stated that there must not be any grading, excavating, filling or other civil work close to their poles, guy wires and tower footings. As well, it is known that there are other existing utilities along that corridor. In order to avoid these potential conflicts and with the other factors considered being equal the Preferred Route is Route 1A.

The other proposed pipeline, the new gathering line (Route 2 in Figure 4) for the Seckerton Pool was assessed for potentially viable alternative routes. Due to the directness of the alignments in the existing corridor, no comparable routing alternatives were identified other than within or adjacent to the existing corridor route. In that, working within and adjacent to the existing corridor will have the least potential for impacts to the surrounding environmental and agricultural features. The crossing of Rokeby Line is unavoidable and will be accomplished through consultation with and direction from the Township of St. Clair.

384800

389800

HILL ST

HWY 40

LADYSMITH RD

TECUMSEH RD

PETROLIA LINE

Existing Dow Moore Gathering Line

Existing Corunna Gathering Line

Corunna Tie-in

Dow Moore Tie-in

Seckerton Tie-in

Existing Seckerton Gathering Line

ROKEBY LINE

KIMBALL RD

N

0 250 500 m

1:17,000

384800

389800

W:\active\60960611\drawing\GIS\MXD\60960611_Fig4_RoutesMap_20101124_DH.mxd

Legend

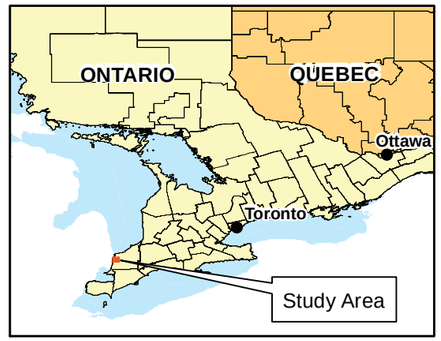
- Study Area
- Tie-in Points
- Existing Gathering Line*
- Highway
- Road
- Railway
- Watercourse
- Waterbody

Well Mode (Gas/ Oil)

- Active Well
- Plugged back and Whipstocked

Proposed Routes

- Potential Route 1A
- Potential Route 1B
- Proposed Route 2



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © ESRI, 2008.
3. Image Sources: © St. Clair Region Conservation Authority, 2006 - Imagery Date: 2006.

* Locations of existing and proposed pipelines are approximate

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DOW MOORE, CORUNNA AND SECKERTON PIPELINE PROJECT

Figure No.
4

Title
POTENTIAL ROUTES MAP

4.2 CONSTRUCTION OVERVIEW

Surveying and clearing will be among the first construction activities undertaken. Since much of the proposed routes are along field edges or adjacent to existing access roads, limited clearing will be required. Where necessary, clearing will be completed at the same time as any required work on access roads. Clearing involves removal of vegetation within woodlots to facilitate construction or widening of the access roads. Existing cleared areas may require additional brush-cutting and/or tree pruning to facilitate construction. To avoid nesting activity of migrating birds, clearing activity should not occur between April 15 and August 15. If unavoidable, clearing during this time of the year may be undertaken providing a nesting survey is completed by qualified persons prior to tree removal. Tree removal compensation is discussed in Section 4.5.3.

Construction of a pipeline across agricultural lands that will be returned to agriculture requires a temporary access rights and an access road if necessary. The proposed location of the temporary road is within the right-of-way (ROW) and is designed to be removed at the completion of construction. For this project, much of the preferred routes have been located along existing access roads that will remain after construction.

The common procedure for construction of temporary access roads follows: once the specific details of the access road within the ROW have been determined, the topsoil is stripped and stored on the ROW, geotextile material is laid down and granular material is placed on the geotextile material to a depth of approximately 0.35 m. The geotextile should extend beyond the sides of the gravel to help to avoid mixing. Following construction, the gravel and geotextile underlying the temporary access road are removed, the disturbed area is chisel ploughed, the topsoil is replaced to the area and the land is returned to its original use.

Minor grading may be required to facilitate construction. Topsoil stripping is undertaken prior to grading to ensure the effects of construction on the topsoil are minimized. Once topsoil stripping and grading are completed, pipe is strung or positioned adjacent to the location where it will be welded and buried.

Excavating the trenches, welding the pipes, lowering in the pipelines, and backfilling the trenches are the next activities to be completed. The trenches will be dug by excavator, including the crossing of the municipal drain. The crossing of Rokeby Line is unavoidable and will be accomplished through consultation with and direction from the Township of St. Clair.

To ensure the integrity of the pipelines, hydrostatic tests are then conducted. Where required, soil compaction is then relieved by subsoiling. Finally, topsoil is replaced, after which the area disturbed by construction is restored by various means such as chisel ploughing, discing or further subsoiling.

EGDI shall follow their Wet Weather Shutdown policy, as detailed in their Construction Manual 2010, when construction directly affects agricultural lands where soils are susceptible to rutting and compaction because of saturated soil conditions. Where the pipeline traverses agricultural land, and an access road does not exist, EGDI's Wet Weather Shutdown policy will be implemented as described in their Construction Manual, 2010. Wet weather shutdown will not apply to any construction activity on gravel surfaces, where compaction rutting or flooding are not a concern. Construction may recommence once soil moisture has lowered to suitable levels as determined by the Company.

4.3 PHYSICAL FEATURES OF THE STUDY AREA

4.3.1 Physiography

Potential Impacts

The Study Area is located in the St. Clair Clay Plains physiographic region of Southern Ontario (Chapman and Putnam, 1984). This clay plain has developed under historical glacial lakes and contains some sandy till but is mainly the finer textured silt and clay (Barnett et al., 1991). Topography around the Study Area is level to nearly level. Subsequently, slope stabilization and erosion are not anticipated. Surface deposits in the area are generally deeper than 35 meters.

Mitigative/Protective Measures

Due to the levelness of the Study Area and deep depth of sediments, mitigation measures are not required.

4.3.2 Bedrock Geology

Potential Impacts

The Paleozoic geography of the Study Area indicates that the bedrock underlying the Study Area is from the Kettle Point Formation (Hewitt, 1972). It is black fissile, bituminous shale generally found between 40-50 m below grade and surface outcrops are uncommon in the area. No outcrops have been identified in the Study Area. Consequently, bedrock is not expected to be encountered during construction of the pipelines or access roads.

Mitigative/Protective Measures

The proposed construction project will involve excavations less that 10 m deep. Contact with bedrock is not expected therefore impacts relating to the bedrock are not anticipated. Mitigative measures for bedrock are not required.

4.3.3 Mineral, Aggregate and Petroleum Resources

Potential Impacts

The Lambton County Official Plan displays that there are no significant mineral aggregate resources identified within the Study Area or Township of St. Clair as a whole. Construction and operation of the proposed pipelines will not sterilize any mineral resources or aggregate deposits.

Aggregate resources, which may be required during construction of the proposed pipelines, are available from sand and gravel operators that supply aggregate throughout Lambton County.

The proposed pipelines do not have any impact on other petroleum resources.

Mitigative/Protective Measures

The lack of reported granular aggregate and mineral deposits within the Township of St. Clair indicates that there is no potential for the Project to affect mineral and/or aggregate resources. Consequently, impacts associated with sterilization of mineral resources are not anticipated to occur as a result of construction or operation of the proposed pipelines.

Since aggregate and petroleum resources will not be affected by the proposed project, mitigative/protective measures are not required.

4.3.4 Climate

Potential Impacts

Climatic conditions require special consideration during the planning, and construction of pipelines. The movement of heavy equipment directly on wet soil may cause deep rutting, severe compaction and mixing of topsoil with subsoil. These potential impacts may break down soil structure and affect soil fertility thereby reducing the potential for agricultural productivity. In particular, accessing the routes during wet periods could have negative impacts on water infiltration and tile drainage if the access roads are not properly constructed or maintained.

A period of heavy rainfall may cause a significant increase in the water level and flow velocity of municipal drains and natural watercourses. When the topsoil is stripped and stockpiled, runoff drainage patterns are temporarily altered. High water levels and rapid flows may result in flooding of the trench lines and subsequent flooding of adjacent lands.

In addition, high winds during a dry summer may erode loose soil material, including topsoil, away from the area of construction. Erosion by wind results in permanent loss of topsoil and creates dust that is a nuisance to residential and agricultural properties located in close proximity to the area of construction.

Mitigative/Protective Measures

To minimize the potential for impacts associated with wet climatic conditions, construction of the temporary access roads, as well as the initial and final stages of pipeline construction are recommended to occur during dry soil conditions. These conditions typically occur in the late spring and summer when evapotranspiration is greatest. If construction cannot be completed during drier periods, strict adherence to the EGDI Wet Weather Shutdown policy is recommended which limits access to constructed roadways. This approach to construction of the proposed pipelines will help to ensure that impacts to soil are minimal.

Drainage ditches in the Study Area are deep to facilitate the extensive tile drainage systems in the area. However, when the topsoil is removed, runoff drainage patterns are temporarily altered and water can accumulate on the ROW. If excessive rainfall causes water to pond on the ROW it should be pumped to an acceptable location to facilitate drying of the soils.

The potential for soil erosion should be monitored and mitigated as appropriate to protect the agricultural capability of the lands. In severe conditions, covering windrows that are expected to remain for extended periods with vegetation or straw can help to stabilize them. Standard topsoil management practices should be employed to ensure that soil windrows are not degraded by wind.

If the mitigation measures recommended to reduce the impact of the inclement weather are followed, no adverse environmental effects from climatic events are anticipated to occur during construction and operation of the proposed pipelines.

4.3.5 Hydrology

4.3.5.1 Surficial Watercourses

Potential Impacts

Due to the relatively level topography of lands crossed by the proposed pipelines, ditches, including the McClemmens Drain, have been dug to drain low areas and accept rain and tile drained water. The SCRCA has indicated that the surface ditches are covered within the ‘Development, Interference with Wetlands and Alterations to Shorelines and Watercourses” Regulation passed pursuant to Section 28 of the Conservation Authorities Act, R.S.O. 1990, Ch. 27. That Regulation prohibits the placement or dumping of fill, construction of a building or structure in the floodplain or alteration to a watercourse without prior written approval of that Authority.

During a site visit on September 17, 2010, when approximately 22 mm of rain had fallen the day before, almost all ditches and drains within the Study Area were dry although a few had shallow pockets of trapped water. No drains in the Study Area were noted to be flowing. However, it is expected that the ditches have water flowing during rainfall events and during the spring runoff.

Water quality may potentially be affected during construction of the pipelines as a result of:

- Open cutting the municipal drain;
- Erosion or sediment release due to inappropriate dewatering techniques;
- Removal of stabilizing vegetative cover; and,
- Accidental spills due to inappropriate handling or storage of fuel, dust suppressants, lubricants or other potential contaminants and from construction vehicles working in or adjacent to the ditch.

Mitigative/Protective Measures

If there is no flow in the McClemmens Drain at the time of construction the drain will be dry, open cut and rehabilitated during one day. If it is flowing at the time of construction, the drain will be sealed by an acceptable method such as with steel plates, the construction area will be drained and the ditch will be open cut. Working in the dry will effectively minimize the potential for water quality issues downstream. If the drain is flowing at the time of construction, the construction area will be isolated by sealing the drain with an acceptable method such as steel plates and a pump around technique will be employed to maintain downstream flows.

Pumping water can increase the potential for erosion and sedimentation. To minimize the potential for impact to surficial watercourses, pumping water should be done with appropriately sized filter bags used to release water into vegetated areas.

Lands should be rehabilitated as construction is completed. Disturbed slopes should be stabilized and re-vegetated as soon as practicable to avoid erosion.

Fuelling and lubrication of construction equipment should be carried out in a manner that minimizes the possibility of spills. On-site fuel tanks and generators should be situated in a designated area that has been bermed and lined with an impermeable barrier. Refueling activities should be monitored at all times; vehicles should never be left unattended while being refueled. All containers, hoses and nozzles should be free of leaks. All fuel nozzles should be equipped with functional automatic shut-offs. Fuel remaining in hoses should be returned to the fuel storage facility. Appropriate spill management equipment must be readily available and maintained within the refueling area.

Spills that are determined to have an impact upon the environment must be reported to the MOE Spills Action Centre at 1-800-268-6060.

4.3.5.2 Groundwater

Potential Impacts

There are approximately 20 homes within the Study Area. While many of these rural dwellings have MOE records of drilled water wells for domestic and agricultural purposes, it is understood that most are on municipal water sources. The MOE water well logs report that there are 20 water wells in the Study Area. The average static level of these wells is approximately 9.8 m below the surface. There are five wells within 500 m to the three proposed routes and two of them are owned by EGDI. The water wells are mapped on The Environmental Features Map, Figure 2.

Standard pipeline construction practices do not involve excavation down to 9.0 m. Therefore, during construction and operation of the proposed pipelines the water table is not expected to be breached. No impact to groundwater is anticipated during the construction or operation of the proposed pipelines. However, there are three privately owned wells within 500 m of the proposed construction.

Mitigative/Protective Measures

The MOE has no standard policy for the assessment of water wells proximal to natural gas developments. EGDI may implement its Water Well Monitoring program if wells are identified that are potentially affected by the proposed work. Water Well Monitoring allows the causes of any change in well water or well performance to be determined if there are complaints about water quality or quantity. If deemed necessary by EGDI, prior to construction, an independent hydrogeologist will review local hydrological conditions, and determine the need for monitoring of the wells close to the development.

4.4 AGRICULTURAL FEATURES

4.4.1 Surficial Soils

Potential Impacts

The proposed project includes access roads and two pipeline lengths and two tie-in segments. This infrastructure will require construction on agricultural lands, and therefore there is the potential to impact agricultural soils found onsite. Excessive passes with heavy equipment can damage topsoil to the point of greatly diminished productivity. Soil characteristics relating to the potential for damage include: moisture content, texture, organic matter content.

The majority of the Study Area is covered with Brookston Clay and the remainder is Caister Clay (see Figure 3). Clay soils can be susceptible to rutting and compaction which can severely reduce agricultural productivity. An increase in moisture levels in these soils further increases the susceptibility to compaction damage. Additionally, careless topsoil stripping, topsoil storage and topsoil replacement can result in unnecessary mixing of topsoil and subsoil that can also reduce agricultural productivity.

During construction, soils with no vegetative cover are more prone to erode. This can result in soil erosion from water and wind. Soil susceptibility to water erosion depends on a number of variables, including; intensity and duration of rainfall events, antecedent soil moisture, surface soil cover, slope, soil texture, soil structure and organic matter content. Similarly, the susceptibility of soils to wind erosion depends on wind speed, surface soil cover, soil texture, soil structure and organic matter levels. Water and wind erosion both can result in a significant loss of topsoil.

Mitigative/Protective Measures

Topsoil from all agricultural lands directly affected by construction of the pipelines and access roads should be stripped. Topsoil from the access road area and pipeline easement should be stripped during dry soil conditions and stockpiled for use during cleanup and rehabilitation. Identification of the topsoil and subsoil interface should be carefully monitored to ensure that all topsoil with limited subsoil is stripped from the easement. To reduce construction impacts associated with wet climatic conditions, the other components of the construction are recommended to occur during dry soil conditions. If construction cannot be completed during the drier summer months when evapotranspiration is greatest, strict adherence to the Construction Manual 2010 is recommended.

Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended in accordance to EGDI's Wet Weather Shutdown policy. Wet weather shutdown will not apply to temporary and permanent gravel access roads or within a station site. When wet weather shutdown has been implemented, heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Usually, construction may continue from gravel work surfaces during wet weather conditions.

Topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction. Topsoil stripping on the easement should be sufficiently wide to ensure that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil. EGDI should maintain separation between topsoil storage piles and subsoil storage piles to reduce potential for soil mixing. If topsoil is required to be imported it should be tested for soybean cyst nematode to ensure that it is not contaminated (see Section 4.4.4).

4.4.2 Subsurface Soils

Potential Impacts

Generally, topsoil has a higher organic matter content that increases its' strength and resilience compared to subsoil. Once the topsoil has been stripped off an area, the subsoil is exposed and becomes more susceptible to the breakdown of its structure and/or tilth. The susceptibility of subsoil to structural degradation depends on soil moisture conditions, soil texture and soil structure.

As stated above, topsoil will be removed from agricultural lands during construction. Once the topsoil is removed and stockpiled, the potential for impacting it is greatly reduced. However, deep compaction of the exposed subsoil may result from the movement of heavy equipment during construction.

On the areas that contain Brookston soils, blue clay is known to be found at depth in the permanently anaerobic part of the soil. Blue clay tends to be structureless and tends to be very hard when dry. It is not anticipated that blue clay will be encountered during the installation of the pipelines, however, if it is encountered, it must be replaced to the depths because it may cause issues with soil productivity if backfilled into the upper layers of the subsoil.

Mitigative/Protective Measures

Adherence to the Construction Manual 2010 will help to protect the subsurface soils during construction.

Once construction has been completed, all the areas that will be returned to agricultural production should be subsoiled using an agricultural subsoiler to relieve soil compaction potentially caused during construction. Stone picking should be conducted after subsoiling.

In the event that blue clay is encountered on agricultural lands, the blue clay should be removed and disposed of at an approved location. Subsequently, the trench should be backfilled with suitable replacement material.

4.4.3 Artificial Drainage

Potential Impacts

Artificial drainage mapping obtained from the Ontario Ministry of Agriculture and Food (OMAF) displays that artificially drained fields, both systematic and random, are found throughout the cultivated portions of the Study Area (see Figure 3). To the extent possible, the impact of the pipeline construction upon artificial drainage systems has been minimized through avoidance during the route selection process and by locating the pipelines along the edge of cultivated fields and along existing corridors or rights-of-way.

Drainage tiles encountered during excavation of the trench will be severed and their operation will be temporarily disrupted. Temporary disruption of drainage and subsurface water flow caused by severed or crushed tiles could result in soil erosion or crop loss due to flooding.

Mitigative/Protective Measures

EGDI will repair or install tile to current standards to ensure that drainage of the property is maintained during construction. Existing tile drains severed during trenching will be recorded, flagged, and repaired immediately after backfilling of the trench. If a main drain, header tile, or large diameter tile is severed, a temporary repair shall be made to maintain field drainage and prevent flooding of the trench and adjacent lands. Severed tile drains that are not immediately

repaired should be capped to prevent the entry of soil, debris, or rodents, and avoid flooding of the trench line.

After the repair of each severed tile, and prior to backfilling, landowners should be invited to inspect and approve the repair. In areas where a significant number of tiles are severed, a tile drainage contractor should be retained to assist EGDI and the landowner in developing a tile drainage restoration plan.

In the unlikely event that crop loss or soil damage occurs as a result of field flooding due to a severed drainage tile, the impacted area should be rehabilitated as soon as possible. It is essential to ensure that rehabilitation activities occur when soils are dry.

4.4.4 Soybean Cyst Nematode (SCN)

Potential Impacts

Construction equipment will be used on the agricultural fields. This construction equipment may have previously worked in areas that were contaminated with Soybean Cyst Nematode (SCN). SCN can be transported within soil stuck to farming implements and heavy equipment. Once a field has been infested, there is significant potential for soybean crop yield reductions (Olechowski, 1990). Therefore it is important to avoid transporting SCN to non-infested fields in soil remaining on construction equipment that is imported from a previous job site. In order to minimize the risk of spreading SCN to unaffected fields, mitigative/protective measures have been established.

Mitigative/Protective Measures

Pre-construction soil sampling should be implemented to identify if the fields are infested with SCN. If a field is identified as having SCN, the following mitigation measures should be considered during construction;

Remove soil from equipment before moving to areas that have not been infested by SCN during construction. This may involve thorough washing of equipment before moving equipment from an infested field to non-infested field, especially, if equipment is “floated” (i.e. moved from one section with positive identification of SCN to another with negative identification);

Where possible, start construction activities on non-infested areas first. Equipment from a non-infested field or less-infested field (as determined from soil analysis) could be moved to a more infested field but not vice-versa.

All properties infested with SCN should be recorded and communicated to the Contractor. The landowner should be advised of the infestation and provided with a copy of OMAF “Fact Sheet” - Order #90-119 (Olechowski, 1990). EGDI will work with OMAF to develop and employ best practices protocol to handle SCN.

Any topsoil imported for cleanup activities should be analyzed for SCN by collecting a composite sample, sending it to a lab for analysis and reviewing results before any imported topsoil is placed on the easement. Imported suitable fill (not containing topsoil) or granular materials do not need to be tested for SCN.

With implementation of these recommendations, no significant adverse impacts upon crop yield resulting from SCN infestation are anticipated.

4.5 BIOPHYSICAL FEATURES

4.5.1 Watercourses and Fisheries

Potential Impacts

At the time of the initial site visit, on September 17, 2010, no drainage ways were flowing. There were isolated pockets of standing water found in a few of the perimeter ditches. These pockets were presumably the temporary result of approximately 22 mm rain that fell the day before. One of the proposed pipelines, the Seckerton gathering Line, crosses the McClemmens Drain which runs east to west from the centre of the Study Area. The proposed pipelines do not affect any natural watercourses or open municipal drains capable of supporting fish habitat.

Mitigative/Protective Measures

Since no natural watercourses or open municipal drains capable of supporting fish habitat are affected by the proposed pipelines, mitigative/protective measures to protect those are not required. If fish are encountered along the ROW at the time of construction they will be moved to an appropriate location within the same aquatic system.

4.5.2 Hydrostatic Testing

Potential Impacts

To facilitate the hydrostatic test, all new pipe sections will be filled with water and pressurized to the standard hydrostatic testing procedure to ensure that the construction is sound. As the pipelines for this project do not traverse any natural source capable of providing this volume of water, it will be hauled or pumped from either a natural or municipal source to a designated filling station. The nearest natural source of water capable of supplying the required volume is the St. Clair River. The nearest municipal source is at the Village of Corunna. A Permit to Take Water will be required from the Ontario Ministry of Environment should the volume withdrawn from a natural source exceed 50,000 L/day. The discharge of hydrostatic test water into natural bodies of water has the potential to impact domestic and agricultural downstream users, as well as fish, aquatic and waterfowl habitats. Uncontrolled discharge of dewatering flows from the hydrostatic test could cause downstream flooding, erosion or sedimentation.

Mitigative/Protective Measures

To reduce the potential for erosion and scouring where the test water is released, appropriate energy dissipation techniques should be utilized. At all release points, discharge piping should be free of leaks and should be properly anchored to prevent erratic movement. For large flows, an energy diffuser on the outlet pipe can be implemented to address the potential for scour. For lower flows, silt bags on the end of the outlet pipe lying on a vegetated surface can be implemented. If energy dissipation measures are found to be inadequate, the rate of release should be reduced or ceased until satisfactory mitigative measures are in place.

Gas powered water pumps used for testing should be protected against the potential for a spill of fuel or lubrication oil. A technique that may be suitable for this is to contain the equipment within a berm underlain by an impermeable plastic that is designed to contain any potential fuel spill or leak.

A plan for a suitable dissipation location of the test water should be confirmed prior to dewatering the lines.

4.5.3 Forestry and Vegetation Cover

Potential Impacts

Most of the trees that were originally adjacent to the proposed pipelines have been cleared or previously pruned for agriculture or access road construction and maintenance. Minimizing tree clearing was a routing consideration for the proposed routes and where possible, the routes have been sited adjacent to and/or along the edges of woodlots. Where the routes are through the approximately 400 m of existing woodlot, they have been sited along an existing previously cleared corridor. Approximately 250 m of that corridor is owned by EGDI. As such, minimal tree removal will be required as part of this project.

Mitigative/Protective Measures

As taken from the Lambton OP, “where it is unavoidable to remove forest cover, it will be replaced with twice the area of forest cover that is removed at a location specified by the landowner whose forest cover was removed and should that owner not have a suitable location, then the replacement would occur at a location specified by the County or local municipality”.

For this project EGDI proposes that the landowner will be entitled to replacement trees (seedlings) calculated on a 2 for 1 area basis for the tree removal in the woodlot. The tree replacement will be scheduled for spring of 2012.

4.5.4 Wetlands and Environmentally Significant Areas

Potential Impacts

No wetlands were identified in the Study Area. There is a provincially significant wetland, the Burton Drain Woodlot, approximately 1.8 km east of the Study Area. Construction and operation of the proposed pipelines are not anticipated to affect any natural or constructed wetlands or environmentally significant areas.

Mitigative/Protective Measures

Since no wetlands or environmentally significant areas will be affected by development of the pipelines, specific mitigative/protective measures have not been developed.

4.5.5 Natural Heritage Features

Potential Impacts

A Stage 1 archaeological assessment was conducted along the proposed routes. The report found during the background information collection that no registered archaeological sites were located within a two kilometer radius surrounding the Study Area. However the results of the background study also determined that the lands involved in the Project have a moderate potential for Native and Euro-Canadian archaeological remains based on the presence of the road crossing and the historic agricultural lands. In view of this it is recommended that a Stage 2 survey be conducted prior to construction. The Stage 1 report is provided in Appendix C.

Mitigative/Protective Measures

It is recommended that a Stage 2 survey be conducted prior to construction. If buried archaeological resources are encountered during construction activities, construction in the vicinity of the archaeological resources should cease immediately and Shari Prowse, Ministry of Culture, London Office (519-675-6898, Shari.Prowse@ontario.ca), and Michael D'Mello, Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Consumer Services (416-326-8404, Michael.D'Mello@ontario.ca) must be notified immediately.

4.5.6 Wildlife

Potential Impacts

Woodlots, watercourse valleys and fence lines in close proximity to the pipelines may provide small but diverse habitat for a number of birds, mammals, reptiles and amphibians. Species that may be encountered during construction include those characteristic to rural Southwestern Ontario, such as rabbit, white-tailed deer, skunk, raccoon, muskrat, fox, coyote, migratory birds, painted turtle and snapping turtle. A search of the MNR Natural Heritage Information Centre (NHIC) database revealed a number of species that may be living or passing through the Study Area.

To permit the installation of the pipelines, trees will be removed from the edge of the woodlot. This creates the potential of disturbing or destroying the nests of migratory birds.

Mitigative/Protective Measures

To minimize the extent of disturbance to wildlife, vehicle movement and equipment storage should be confined to the access roads and pipeline easements/work areas. Every effort should be taken to not harm local wildlife and to minimize any impact to wildlife habitat.

Further, to avoid nesting activity of migrating birds, clearing activity should not occur between April 15 and August 15, as per the Migratory Bird Act. In the event that this timeline is not practicable a migratory bird nesting survey must be conducted by a qualified ornithologist immediately prior to the construction. If the survey results in no active nests being identified then construction could proceed. If an active nest is identified the construction activity in that area would have to wait until the nest is vacated.

4.6 PERMITS AND APPROVALS REQUIRED

The following is a list of permits and approvals that may be required in order to construct the proposed pipelines:

- Permission for ‘Leave to Construct’ the proposed pipeline and associated facilities from the OEB;
- Ontario Pipeline Coordinating Committee (OPCC) review and comments;
- ‘Fill, Construction and Alteration to Waterways’ permit from the SCRCA;
- Permit to cross municipal drain from the Township of St. Clair;
- Permit to cross Township road from the Township of St. Clair (Rokeby Line);
- Construction permit under Lakes and Rivers Improvement Act (MNR);
- A permit to take water (PTTW) will be required from the MOE if water is to be pumped from a trench (dewatering) or used for hydrostatic testing in excess of 50, 000 L/day, before any water is removed;
- Fire permit may be required for burning brush (Municipality);
- Tree clearing permit may be required (Municipality);
- Haul routes permit/approval may be required for heavy loads (MTO, Municipality);
- TSSA permit must be granted prior to commissioning the new facilities.

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5.0 Cumulative Effects

Policy makers are increasingly seeing Cumulative Effects Assessment ("CEA") as representing a *best practice* for effects assessment (IAIA, 1999). Consequently, the recognition of CEA as a best practice is now reflected in many federal and provincial regulatory documents. With regard to development of hydrocarbon pipelines in Ontario, this best practice principle is reflected in the OEB's 2003 *Guidelines*, Section 4.3.13, which notes that Cumulative Effects ("CE") should be identified and discussed in the Environmental Report as an integral part of the assessment.

5.1 METHODOLOGY

This CEA describes the potential CE of the proposed project in combination with the existing environment and the effects of other projects that are planned for implementation in the future. CE's include the temporal and spatial accumulations of change that occur within an area or system due to past, present, and future activities. Change can accumulate within systems in either an additive (*i.e.*, cumulative) or interactive (*i.e.*, synergistic) manner.

Specifically, this CEA is designed to evaluate and manage the additive and interactive effects from the following sources:

- Existing infrastructure, facilities, and activities as determined from available data sets;
- The proposed project and associated infrastructure as described in this Environmental Report; and,
- Future activities where the undertaking will proceed, or has a high probability of proceeding (are known to be within the approval process).

This level of analysis allows the CEA to focus on the issues that are pertinent to the Project and to avoid the generation and evaluation of information that is of little diagnostic value.

5.2 STUDY BOUNDARIES

5.2.1 Spatial

The spatial study boundaries discussed in this ER were contained within the Study Area. These boundaries are considered to be appropriate when considering the surrounding land uses and the limited length of the proposed pipelines. The CEA used the same boundaries to identify potential effects from the Project.

The Study Area boundary is beyond the *zone of influence* of project construction and operation activities (e.g., dust and noise), and consequently, the identified effects will have diminished to background levels at the edges of the Study Area. The Study Area is also considered conservative in terms of managing both effects and risks.

5.2.2 Temporal

The temporal boundaries for this CEA reflect the nature and timing of activities and the availability of information surrounding future projects with a high probability of proceeding. The Project includes the construction and operation of two buried natural gas pipelines and two buried tie-in segments of natural gas pipelines. Fifty years of pipeline operation is used as the operating lifespan for the purpose of this CEA, although the pipelines may be operational beyond fifty years. For the purpose of the CE exercise, three time periods were selected for evaluation in the CEA: 2010, 2011, and 2016.

Existing conditions were considered as those that existed and were identified during the EA process (i.e., 2010). In some cases, published data were not current to 2010 and thus the assessment relied on a combination of best available information, public input, and field investigations. The year 2011 covers construction and post construction clean-up activities. The year 2016 was selected to represent the operation and maintenance period.

Although rare in occurrence, it is plausible that accidental or emergency events may arise due to an unforeseen chain of events during the Project's operational life. Because of the rarity and magnitude of such events, they have not been assessed here, as they are extreme in nature when compared to the effects of normal construction and operation activities, and require their own response plans. Retirement of the Project components is another event that is beyond the temporal boundaries of this CEA and will not be assessed here.

5.3 ANALYSIS OF CUMULATIVE EFFECTS

Section 4 of this Environmental Report considered potential effects of the construction and operation of the Project components on specific features and conditions, and proposed mitigation measures to avoid or reduce the potential for effect. This CEA evaluates the significance of residual effects (after mitigation) of the construction and operation of the Project components along with the effects of other Projects. The following definitions, as adopted from the Canadian Environmental Assessment Agency (1999), explains how the significance of residual effects was determined:

Table 1: Cumulative Effects Definitions

Issues	Derived from public consultation, project design, and Project Team expertise		
Features	Components of the natural and socio-economic environment likely to be affected		
Duration	Short Term	Medium Term	Long Term
	effects noticeable for <1 year before recovery to baseline conditions	effects noticeable for 1-10 years before recovery to baseline	effects Noticeable for more than 10 years before recovery to baseline
Magnitude	Low	Moderate	
	limited or no impairment of the features	noticeable change in feature in the short term, but recovery to baseline conditions should occur	
Frequency	Intermittent	Continuous	
	spatially and/or temporally dispersed effect on the feature	ongoing effect to the feature	
Confidence	Moderate	High	
	varied environmental conditions may arise, accumulate, and influence the rankings	sufficient information and experience exist to support rankings	
Significance (Cumulative)	None	Low	Moderate
	feature capable of returning to baseline condition with no loss of function	feature may be influenced by project activities, but is capable of returning to near baseline conditions	feature is permanently influenced by project activities, with limited capability of returning to near baseline conditions

5.3.1 Year 2010: Baseline Conditions

The primary land-use in the Study Area is rural\agricultural. The environmental and agricultural features identified in the Study Area are shown on Figures 2 and 3 respectively.

The Study Area and the regions surrounding the Study Area have been farmed extensively because of their agricultural potential. This historic farming has led to vegetation removal, alteration of watercourses due to artificial drainage and limitations to residential and urban development in the region. These effects of intensive agriculture have been observed and have been taken into consideration in the establishment of the baseline conditions.

The Study Area falls within the jurisdictions of the SCRCA and is subject to their Regulations. The most significant watercourse in the Study Area is a municipal drain, the McClemmens Drain. There are other ditches along the road sides and drainage swales in the fields.

The forest cover within the Study Area runs east west through the middle of the concession blocks. It consists of woodlots divided by access roads and utility corridors. Most of the natural vegetation was cleared for agricultural purposes. The Study Area is within the Deciduous (Carolinian) Forest Region.

The most significant socio-economic features in the Study Area are the residences.

5.3.2 Year 2011: Construction

Construction activities associated with development of the proposed pipelines in 2011 will include:

- Field investigations as required along the preferred route (fall 2010 through spring 2011);
- Widening and construction of access roads (spring 2011);
- Pipe installation, tie-ins, station construction and commissioning (summer and fall 2011); and,
- Post construction clean-up activities (summer and fall 2011).

Agencies were contacted to determine the nature of any other projects planned in the Study Area that are in the final stages of implementation or approval. To date, the agencies contacted did not identify any proposed projects in the area.

Parts of EGDI's ongoing expansion, briefly discussed in Section 1, are included in this EA and parts are not. EDGI confirms that there are plans for construction associated with the project that fall outside of the EA requirement for Leave to Construct approval. Specifically, there are two metering stations and another section of gathering pipeline being built within EGDI lands to replace an existing pipe. The cumulative effects assessment of this ER discusses the effects of the construction and operation of the pipelines proposed in this EA along with the components that fall outside of this EA.

The potential for significant CE to occur as a result of the proposed Project construction and operation was minimized through the route selection process. By constructing adjacent to the access roads, restrictions on urban expansion, disruption to natural features and disruption to

agricultural lands have been minimized for the construction of the pipelines. Steps have been taken to ensure the amount of land disrupted through the construction process is minimized. There still remains the potential for some limited CE to occur, as shown in Table 2.

Table 2 summarizes the relationship between the effect “issue” and the likelihood of whether or not project activities will have a significant CE on a given “feature”. The determination of cumulative significance is explained below for each issue having a low to moderate effect. Terminology is defined in Section 5.3.

The majority of the issues listed in Table 2 are considered to have no cumulative significance. Noise and dust disturbances are short term, localized and can be largely dissipated through mitigation. Once construction is complete, noise and dust will no longer be issues with this project.

There is the potential for the pipelines proposed in this EA to be built at the same time as the lines and stations within the Study Area that fall outside of this EA. Concurrent construction projects may result in increases to road traffic, noise and dust. The CE of these disturbances can be considered short term and will remain localized.

Vegetation removal resulting from this project is anticipated to be a very limited amount. Some clearing along the edge of the woodlots, within the right-of-way, is planned. The other pipeline construction occurring within the Study Area is planned to traverse agricultural lands therefore no woodlot removal is anticipated. The planned construction of valve stations within the Study Area may require very limited woodlot removal. No additional fragmentation of woodlots will result from the proposed project and therefore the CE resulting from the projects in the area is anticipated to be low.

No CE is anticipated concerning archaeological resources since none are anticipated to be associated with the proposed project.

Groundwater is not expected to be disturbed or contaminated by the construction of the Project assuming that necessary mitigative recommendations are adhered to. The installation of temporary or permanent tile drainage in the area is not anticipated to have a significant effect on the groundwater in the area as the agricultural fields within the Study Area are already tile drained.

The McClemmens Drain is a municipal drain that the proposed Seckerton gathering pipeline crosses. The drain was dry at the time of the field assessment; however, the construction method used will be appropriate to the conditions in the drain at the time of construction. If the drain is dry at the time of construction, the drain will be open cut. If the drain is wet but not flowing, the drain will be sealed and then open cut. If the drain is flowing at the time of construction, the construction area will be isolated. The water flow will be maintained using a pump around technique and the ditch will be open cut.

It is assumed that throughout the duration of construction, demand for local goods and services will increase. Construction crews typically have some local staff and those from further away typically stay in local hotels. Either of these scenarios will bring revenue into the area. When construction is complete the additional demand for goods etc. will decline. However, an increase to municipal taxes may increase local revenues in the long term.

5.3.2.1 Low Significance

Issues of low significance include the effects to agricultural land and vegetation removal. The impacts on topsoil compaction are anticipated to be low in magnitude and reversible in the long-term. As long as mitigative measures are taken in the construction of the Project, topsoil compaction is not anticipated to be a concern in the long-term. Effects on artificial drainage are not anticipated to be a long-term concern as long as correct mitigative measures are taken during construction to minimize the effects on these features. The effects on vegetation removal, woodlot edges and terrestrial habitat, are considered to be low in magnitude as a result of the locating the preferred routes along field edges and existing corridors and constructing within the boundaries of the Migratory Bird Act. The potential for an excessive increase to road traffic resulting from the proposed pipeline and those activities that fall outside of this EA is low and will be eliminated once the construction is complete.

5.3.2.2 Moderate Significance

An issue of moderate cumulative significance is the effect of the proposed project on the local economy. For example, construction of the proposed project will result in the demand, both locally and regionally, for labour and project supplies such as food, accommodation, steel, gravel, and equipment. This positive effect will benefit the community during construction and will diminish to background levels upon the completion of the construction phase.

Table 2: Summary of Potential Cumulative Effects for All Projects to the Year 2011 (Construction)

Issue	Feature	Criteria for Determining Cumulative Effects					
		Duration	Magnitude	Frequency	Permanence	Confidence	Cumulative Significance
Noise	People	Short term	Low	Intermittent	Non permanent	High	None
Dust	People	Short term	Low	Intermittent	Reversible in short term	High	None
Road traffic	People	Short term	Low	Intermittent	Non permanent	High	None
Topsoil Compaction	Agricultural land	Long term	Low	Continuous	Reversible in long term	High	Low
Artificial Drainage	Agricultural land	Short term	Low	Intermittent	Reversible in short term	High	None
Vegetation Removal	Woodlot edges	Long term	Low	Intermittent	Reversible in long term	High	Low
	Terrestrial habitat	Medium – long term	Low	Intermittent	Reversible in medium – long term	High	Low
Provincially Significant Wetland	N/A						
Archaeological Resources	People	Short term	Low	Intermittent	Non permanent	High	None
Land-Use	Agricultural land	Long term	Moderate	Continuous	Reversible in short term	High	None
Economy	Employment, supplies, municipal revenue	Long term	Moderate	Continuous	Permanent	High	Moderate

5.3.3 Year 2016: Operation and Maintenance

Associated project operations and maintenance activities will continue to take place in the future. By 2016, any vegetated areas cleared during 2011 to accommodate pipeline construction will be re-established to baseline conditions potentially in an alternate, appropriate location.

Potential CE to terrestrial fauna will diminish between 2011 and 2016. Dust, noise, increased traffic and other disturbances will be limited to infrequent occurrences of maintenance activities.

Although linear facility corridors serve many purposes, they can lead to the spatial accumulation of effects. One such effect is the repeated disturbance of soil, contributing to compaction and loss of structure resulting in reduced crop yield. Any reduction in crop yield caused by pipeline construction will be compensated as per existing agreements. By 2016, it is expected that crop yields will have returned to about 90% pre-disturbance yield (ESG International, 1999).

5.3.3.1 Low Significance

No significant CE's are anticipated for 2016 as long as appropriate mitigative measures are taken during construction and proper project component maintenance schedules are followed.

5.3.3.2 Moderate Significance

No significant adverse CE is predicted based upon the available data and conservative assumptions made regarding land-use. Table 3 summarizes the potential CE that may be present in 2016.

Effects on the economy from the proposed project may result in cumulative effects of moderate significance. The Project will provide local governments with an additional tax base with limited demand on government services and resources. Periodic demand for supplies and services will also be experienced with operation of the pipelines.

5.4 CUMULATIVE EFFECTS SUMMARY

The potential CE of construction and operation of the Project were assessed. The Study Area boundary was used to assess the potential for additive and interactive effects of the proposed pipelines. By determining the location of the facilities in consultation with the affected landowners and implementing site-specific mitigation measures, the overall potential for cumulative effects is considered to be of low significance.

In terms of this CEA, it has identified: key historical land-use alterations, current development activities, proposed future or concurrent projects, and the effects of the proposed project on the natural and socio-economic environment. The magnitude of possible effects can be minimized with proper timing and implementation as well as project-specific mitigative measures. The proponents of the related projects should assess the CE of their respective projects if the timing varies considerably from when this CEA was completed.

Table 3: Summary of Potential Cumulative Effects for All Projects to the Year 2016 (Operation and Maintenance)

Issue	Feature	Criteria for Determining Cumulative Effects					
		Duration	Magnitude	Frequency	Permanence	Confidence	Cumulative Significance
Noise	People	Short term	Low	Intermittent	Permanent	High	None
Dust	People	Short term	Low	Intermittent	Reversible in short term	High	None
Road Traffic	People	Long term	Low	Intermittent	Permanent	High	None
Topsoil Compaction	Agricultural land	Long term	Low	Continuous	Reversible in long term	High	None
Artificial Drainage	Agricultural land	Short term	Low	Intermittent	Reversible in short term	High	None
Vegetation Removal	Woodlot edges	Long term	Low – moderate	Intermittent	Reversible in long term	High	None
	Terrestrial habitat	Medium – long term	Low – moderate	Intermittent	Reversible in medium – long term	High	None
Provincially Significant Wetlands	N/A						
Archaeological Resources	People	Short term	Low	intermittent	Non permanent	High	None
Land-Use	Agricultural land	Long term	Moderate	Continuous	Permanent	High	None
Economy	Employment, supplies, municipal revenue	Long term	Moderate	Continuous	Permanent	High	Moderate

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6.0 Conclusion and Summary

This environmental assessment investigated data on the physical, biological and socio-economic environment within the Study Area, including the proposed pipeline routes. It is Stantec's opinion that the locations of the proposed pipelines have minimal potential for environmental effects and that the mitigation measures proposed will ensure that construction and operation of the pipelines will result in negligible long-term effects.

The first and most important consideration in minimizing the environmental impact of a linear facility is at the route selection stage. Most environmentally sensitive features were avoided by locating the proposed pipeline routes adjacent to previously disturbed rights-of-way or easements and along the edge of cultivated fields. Comments from agencies, stakeholders and the landowners within the Study Area were requested. Those received have been addressed and where appropriate were incorporated into the selection of the pipeline routes.

Construction of the proposed pipelines does not require any unique or complex mitigation techniques since routing has helped to avoid features that are sensitive to disturbance. Mitigation measures identified in the report are considered sufficient to protect the features encountered along the pipeline routes. On site construction inspection will ensure that the commitments made in this report are adhered to.

STANTEC CONSULTING LTD.

Steve Thurtell

Steve Thurtell,
Project Manager

David Wesenger
Project Director

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7.0 Bibliography

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Appendix A

Landowner Contact Letter, Landowner Correspondence

Stantec Consulting Ltd.
70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

October 13, 2010
File: 160960611

Name
Address
Town, Province
Postal Code

Attention: Title. F_Name L_Name

Dear Title. L_Name:

Reference: Dow Moore, Seckerton and Corunna Interconnect Pipeline Project

Stantec Consulting Ltd. (“Stantec”) has been retained by Enbridge Gas Distribution Inc. (EGDI), to prepare an Environmental and Socio-Economic Assessment Report (ER) for a project involving approximately 3,500 meter (m) of buried natural gas pipeline south of Sarnia, Ontario. This project is part of the ongoing expansion of the natural gas storage system in St. Clair Township.

The project comprises three sections. One section of this pipeline project includes the construction of a gathering pipeline, 1,500 m long and 508 mm (20 inch) in diameter, within the Seckerton pool and another 400 m section of 508 mm (20 inch) diameter pipeline to replace an existing 406 mm (16 inch) section of gathering pipeline in the Seckerton pool. As well, the project includes the construction of approximately 1,500 m of 508 mm (20 inch) diameter steel pipeline to connect the existing Dow Moore gathering pipeline to the proposed gathering pipelines for the Corunna and Seckerton natural gas storage pools. The ER will meet the requirements of the Ontario Energy Board’s (“OEB”) Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon pipelines and facilities in Ontario (May 2003).

A Study Area surrounding the project has been identified within the area west of Tecumseh Road, south of Petrolia Line, approximately 600 m south of Rokeby Line, and 500 m west of Ladysmith Road, as shown on the attached map. The properties being screened to locate existing environmental features are listed below.

COUNTY	TOWNSHIP	CONCESSION	LOT
Lambton	Moore	10	Part of Lot 22
Lambton	Moore	10	Lot 21
Lambton	Moore	10	Lot 20
Lambton	Moore	10	Lot 19
Lambton	Moore	9	Part of Lot 22
Lambton	Moore	9	Lot 21
Lambton	Moore	9	Lot 20
Lambton	Moore	9	Lot 19
Lambton	Moore	8	Part of Lot 22
Lambton	Moore	8	Lot 21
Lambton	Moore	8	Lot 20
Lambton	Moore	8	Lot 19

Stantec

Reference: Dow Moore, Seckerton and Corunna Interconnect Pipeline Project

At this time, Stantec is collecting information and compiling an environmental inventory for these associated lands. We ask that you review the parcels potentially affected and complete the Landowner Questionnaire included in this package. This will allow you to provide any relevant environmental information that you have regarding this project. Please note that responses would be appreciated prior to October 22, 2010.

Thank you for your time in responding to our request. If you have any questions concerning the project or the ER please contact the undersigned by phone or email.

Sincerely,

STANTEC CONSULTING LTD.

Steve Thurtell
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
steve.thurtell@stantec.com

Attachment: Location Map, Questionnaire.

384800

389800

HILL ST

HWY 40

PETROLIA LINE

Existing Dow Moore Gathering Line

Existing Corunna Gathering Line

Corunna Tie-in

Dow Moore Tie-in

Existing Sackerton Gathering Line

Existing Corunna Gathering Line

TECUMSEH RD

ROKEBY LINE

LADYSMITH RD

KIMBALL RD

N

0 250 500 m

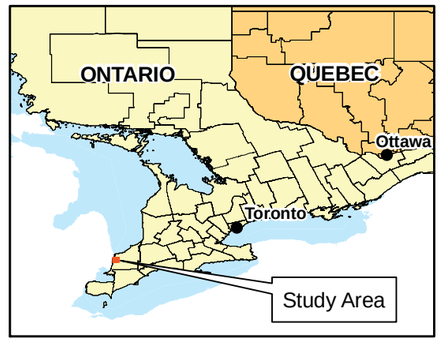
1:17,000

Legend

- Study Area
- Tie-in Points
- Existing Gathering Line*
- Highway
- Road
- Railway
- Watercourse
- Waterbody
- Provincially Significant Wetland

Well Mode

- Abandoned Well
- Active Well
- Plugged back and Whipstocked



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © ESRI, 2008.
3. Image Sources: © St. Clair Region Conservation Authority, 2006 - Imagery Date: 2006.

* Locations of existing pipelines are approximate

Stantec

September 2010
160960611

Client/Project
ENBRIDGE GAS DISTRIBUTION INC.
NEXUS PROJECT

Figure No.
1

Title
LOCATION MAP

384800

389800

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Dow Moore, Seckerton and Corunna Interconnect Pipeline Project
Environmental and Socio-Economic Impact Assessment

Landowner Questionnaire

Please complete this questionnaire and mail it to Stantec Consulting Ltd. at your earliest convenience. A postage paid, self-addressed envelope has been included in this package. Thank you for your assistance.

Please read the information and maps provided before completing this questionnaire. If you require any assistance or clarification while completing the questionnaire please contact a Stantec or Enbridge Gas Distribution Inc. ("EGDI") representative.

1. Please identify any environmental features in the Study Area that you feel are important to consider during the study (please state your reasons).

_____

_____

_____

_____

2. Which factors do you feel are most important to the proposed pipelines (i.e., agricultural capability, artificial drainage, landowner preference, etc.)?

_____

_____

_____

_____

3. Considering the location of the Study Area as shown on the map, please indicate whether there are any potential effects to you, your property, or business that EGDI would need to address prior to construction and operation of the pipelines and project components.

4. Do you have any other concerns about this proposed project that you would like to bring to our attention?

Thank you for completing this questionnaire.

Would you like someone to contact you about any items identified above?_____

If 'yes' please provide your contact information below:

Name: _____

Address: _____

Phone: (home) _____ (work) _____

Email: _____

Convenient time you can be reached: _____

INFORMATION COLLECTED BY THIS QUESTIONNAIRE COULD BECOME PART OF THE PUBLIC RECORD. IF YOU HAVE PROVIDED YOUR NAME, BUT WISH YOUR ANSWERS TO REMAIN PRIVATE, PLEASE INDICATE SO BY SIGNING BELOW.

Signature: _____

Date: _____

Landowner Response Summary Chart

Landowner Date Received	Comments	Response
1.Tom Wilson October 20, 2010	Comments were outside of scope of ER, regarding compensation, long term plans of EGDI	Comments were forwarded to EGDI No response from Stantec
2.Nova Chemicals October 21, 2010	A response may or may not be sent	Comments not received to date
3.Bruce Knight October 18, 2010	Will be interested to see preferred routes	Comments were forwarded to EGDI No response from Stantec
4.No public comments October 19, 2010		No response from Stantec
5.No public comments October 19, 2010		No response from Stantec
6. No public comments October 19, 2010		No response from Stantec
7. No public comments October 20, 2010		No response from Stantec
8. No public comments October 26, 2010		No response from Stantec
9. Bob McClemmens Nov 15, 2010	Tile drains and woodlots are most important factors One of the lines is on my property Location and size of the metering station	Comments were forwarded to EGDI Tiles will be repaired and woodlot cutting has been minimized through routing

Appendix B

List of Agencies/Stakeholders Contacted
Agency Contact Letter and
Agency Correspondence

AGENCY & ORGANIZATION CONTACTS

Commenting / Interested Agencies

Title	First Name	Last Name	Agency	Division	Title	Mail address	Town	Pr	Postal	Phone/Fax #
Mr.	Ken	Yaraskavitch	Ministry of Natural Resources	Chatham Division	Area Supervisor	Mail address: P.O. Box 1168, N7M 5L8 Street: 870 Richmond Street W.	Chatham	ON	N7M 5L8	T: (519) 354-1779 F: (519) 354-0313
Mr.	Chris	Hutt	Ministry of Environment	Sarnia District Office	Senior Environmental Officer	1094 London Rd	Sarnia	ON	N7S 1P1	T: (519) 383-3784 F: (519) 336-4280
Mr.	John	Turvey	Ministry of Agriculture and Food	Southwestern Ontario	Land Use Policy Specialist	1 Stone Rd. West	Guelph	ON	N1G 4Y2	T: (519) 826-3555 F: (519) 873-4062
Ms.	Cathy	Giesbrecht	Ministry of Transportation	Corridor Management Section West Region	Regional Development Review Coordinator	659 Exeter Rd. 3rd Floor	London	ON	N6E 1L3	T: (519) 873-4560 F: (519) 873-4228
Ms.	Shari	Prowse	Ministry of Culture	Culture Programs Unit	Archaeology Review Officer	900 Highbury Ave.	London	ON	N5Y 1A4	T: (519) 675 6898 F: (519) 675-7777
Mr.	Ralph	Coe	St. Clair Region Conservation Authority		General Manager	205 Mill Pond Crescent	Strathroy	ON	N7G 3P9	T: (519) 245-3710 F: (519) 245-3348
Mr.	Jeff	Lawrence	St. Clair Region Conservation Authority		Environmental Planner	205 Mill Pond Crescent	Strathroy	ON	N7G 3P9	T: (519) 245-3710 F: (519) 245-3348
Mr.	Bill	Bilton	Lambton County	Planning and Development Services Department	Chair	789 Broadway St., PO Box 3000	Wyoming	ON	N0N 1T0	T: (519) 845-0801 F: (519) 845-3817
Mr.	Mike	Bradley	City of Sarnia	Mayor's Office	Mayor	City Hall, 255 North Christina St., PO Box 3018	Sarnia	ON	N7T 7N2	T: (519) 332-0330 Ext. 312
Ms.	Kim	Bresee	City of Sarnia	Planning Department	Director, Planning and Building	City Hall, 255 North Christina St., PO Box 3018	Sarnia	ON	N7T 7N2	T: (519) 332-0330 Ext. 292

AGENCY & ORGANIZATION CONTACTS

Title	First Name	Last Name	Agency	Division	Title	Mail address	Town	Pr	Postal	Phone/Fax #
Mr.	Dave	Boushy	City of Sarnia		Councillor	d.boushy@cogeco.ca				
Mr.	Andy	Bruziewicz	City of Sarnia		Councillor	andybruziewicz@hotmail.com				
Mr.	Terry	Burrell	City of Sarnia		Councillor	terry@terryburrell.ca				
Mr.	Jim	Foubister	City of Sarnia		Councillor	jimfoubister@sarnia.ca				
Ms.	Anne Marie	Gillis	City of Sarnia		Councillor	annemariegillis@sarnia.ca				
Mr.	Mike	Kelch	City of Sarnia		Councillor	mjkelch@mac.com				
Mr.	Bev	MacDougall	City of Sarnia		Councillor	bevmacdougall@ebtech.net				
Mr.	Jon	McEachran	City of Sarnia		Councillor	JonMcEachran@hotmail.com				
Mr.	Ezio	Nadalin	Lambton County	Planning and Development Department	Planner	789 Broadway St., PO Box 3000 Ezio.nadalin@county-lambton.on.ca	Wyoming	ON	N0N 1T0	T: (519) 845-0801 X5343 F: (519)845-3817
Mr.	Steve	Arnold	St. Clair of Township	Mayor		1155 Emily Street	Mooretown	ON	N0N 1M0	T: (519) 867-3333
Mr.	Peter	Gilliland	St. Clair of Township	Deputy Mayor		1155 Emily Street	Mooretown	ON	N0N 1M0	(519) 862-3534
Mr.	Jeff	Agar	St. Clair of Township	Ward 1	Councillor	1155 Emily Street	Mooretown	ON	N0N 1M0	(519) 862-5062
Mr.	Pat	Brown	St. Clair of Township	Ward 1	Councillor	1155 Emily Street	Mooretown	ON	N0N 1M0	(519) 862-2050
Ms.	Patricia	Carswell-Alexander	St. Clair of Township	Ward 1	Councillor	1155 Emily Street	Mooretown	ON	N0N 1M0	(519) 864-4006
Mr.	Steve	Miller	St. Clair of Township	Ward 2	Councillor	1155 Emily Street	Mooretown	ON	N0N 1M0	(519) 677-5676
Mr.	Darrell	Randell	St. Clair of Township	Ward 2	Councillor	1155 Emily Street	Mooretown	ON	N0N 1M0	(519) 627-3764
Ms.	Caroline	Knight	Ontario Realty Corporation		Communications Advisor	caroline.knight@ontariorealty.ca				
Mr.	Richard	Schveighardt	Ontario Realty Corporation		Regional Manager	Richard.schveighardt@ontariorealty.ca	Guelph			

AGENCY & ORGANIZATION CONTACTS

OPCC Members

Title	First Name	Last Name	Agency	Division	Title	Mail address	Town	Pr	Postal	Phone/Fax #
Ms.	Donna	Mundie	Ministry of Agriculture, Food, and Rural Affairs	Ontario Pipeline Coordinating Committee		1 Stone Road West	Guelph	ON	N1G 4Y2	T: (519) 826-3120 F: (519) 826-3259
Mr.	Oscar	Alonso	Technical Standards and Safety Authority	Ontario Pipeline Coordinating Committee		3300 Bloor Street West 14th Floor	Etobicoke	ON	M8X 2X4	T: (416) 734-3353
Mr.	Michael	Johnson	Ministry of Culture	Ontario Pipeline Coordinating Committee		400 University Avenue 4th Floor	Toronto	ON	M7A 2R9	T: (416) 314-7144 F: (416) 314-7175
Ms.	Zora	Crnojacki	Ontario Energy Board	Ontario Pipeline Coordinating Committee		2601-2300 Yonge Street, 24th Floor PO Box 2319	Toronto	ON	M4P 1E4	T: (416) 440-8104 F: (416) 440-7656
Mr.	Doug	Peeling	Ministry of Transportation	Ontario Pipeline Coordinating Committee		301 St. Paul Street 2nd Floor	St. Catharines	ON	L2R 7R4	T:(905) 704-2916 F: (905) 704-2030
Ms.	Sharon	Rew	Ministry of Natural Resources	Ontario Pipeline Coordinating Committee		300 Water Street 5th Floor North Tower PO Box 7000	Peterborough	ON	K9J 8M5	T: (705) 755-5273 F: (705) 755-1971
Mr.	Usman	Ahmed	Ministry of Municipal Affairs and Housing	Ontario Pipeline Coordinating Committee		777 Bay Street 14th Floor	Toronto	ON	M5G 2E5	T: (416) 585-7181 F: (416) 585-6882
Mr.	Bruce	Curtis	Ministry of Municipal Affairs and Housing	Southwestern Municipal Services	Manager					T: (519) 873-4026

AGENCY & ORGANIZATION CONTACTS

Stakeholders

Title	First Name	Last Name	Agency	Division	Title	Mail address	Town	Pr	Postal	Phone/Fax #
Mr.	Dave	McLachlin	Ducks Unlimited – Ontario		Head of Wetland Restoration	740 Huronia Road Unit#1	Barrie	ON	L4N 6C6	T: (705) 721-4444 X 231 F: (705) 721-4999
Ms.	Caroline	Schultz	Federation of Ontario Naturalists		Executive Director	366 Adelaide St. W. Suite 201	Toronto	ON	M5V 1R9	T: (416) 444-8419 F: (416) 444-9866
Mr.	Peter	Jeffrey	Ontario Federation of Agriculture		Senior Researcher	40 Eglinton Ave. E., 5th Floor	Toronto	ON	M4P 3B1	T: (416) 485-3333 F: (416) 485-9027
Mr.	Burgess	Don	Ontario Federation of Agriculture	Middlesex-Lambton	Member Service Representative	633 Lions Park Drive, P.O. Box 639	Mount Brydges,	ON	N0L 1W0	T: (877) 668-3276 F: (519) 264-9091
Mr.	Kevin	Forbes	Lambton Federation of Agriculture		President	5378 Waterworks Rd.	Sarnia	ON	N7T 7H3	T: (519) 332-6783
Mr.	Bob	Bailey	MPP	Sarnia-Lambton		836 Upper Canada Drive	Sarnia	ON	N7T 1A4	T: (519) 337-0051 F: (519) 337-3246
Ms.	Pat	Davidson	MP	Sarnia-Lambton		1000 Finch Drive, Unit 2	Sarnia	ON	N7S 6G5	T:(519) 383-6600 Fax:(519)383-0609
Chief	Chris	Plain	Aamjiwnaang First Nation			978 Tashmoo Avenue	Sarnia	ON	N7T 7H5	
Chief	Tom	Bressette	Chippewas of Kettle and Stony Point			6247 Indian Lane,RR#2	Forest	ON	N0N 1J0	Phone:519-786-2125 Fax: 519-786-2108
Chief	Dean	Jacobs	Walpole Island First Nation			RR#3	Wallaceburg	ON	N8A 4K9	Tel. (519) 627-1481

AGENCY & ORGANIZATION CONTACTS

Title	First Name	Last Name	Agency	Division	Title	Mail address	Town	Pr	Postal	Phone/Fax #
										Fax. (519) 627-0440
			Indian and Northern Affairs Canada		E-mail: eacoordination_on@inac.gc.ca					
Mr.	Tony	Ierullo	Hydro One		Manager	483 Bay Street North Tower 15th Floor	Toronto	ON	M5G 2P5	416-345-5213

Stantec Consulting Ltd.
70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

October 13, 2010
File: 160960611

Agency
Address
Town, Province
Postal Code

Attention: Title. F_Name L_Name, Position

Dear Title. L_Name:

Reference: Dow Moore, Seckerton and Corunna Interconnect Pipeline Project

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Stantec

Reference: Dow Moore, Seckerton and Corunna Interconnect Pipeline Project

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Thank you for your time in responding to our request. If you have any questions concerning the project or the ER please contact the undersigned by phone or email.

Sincerely,

STANTEC CONSULTING LTD.

Steve Thurtell
Project Manager
Tel: (519) 836-6050
Fax: (519) 836-2493
steve.thurtell@stantec.com

Attachment: Location Map

384800

389800

HILL ST

HWY 40

PETROLIA LINE

Existing Dow Moore Gathering Line

Existing Corunna Gathering Line

Corunna Tie-in

Dow Moore Tie-in

Existing Sackerton Gathering Line

Existing Corunna Gathering Line

ROKEBY LINE

LADYSMITH RD

TECUMSEH RD

KIMBALL RD

0 250 500 m

1:17,000

384800

389800

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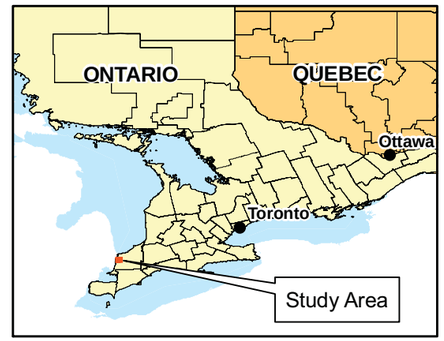
Legend

- Study Area
- Tie-in Points
- Existing Gathering Line*
- Highway
- Road
- Railway
- Watercourse
- Waterbody
- Provincially Significant Wetland

Well Mode

- Abandoned Well
- Active Well
- Plugged back and Whipstocked



Notes

1. Coordinate System: UTM NAD 83 - Zone 17 (N).
2. Data Sources: Ontario Ministry of Natural Resources © Queens Printer Ontario, 2009; © ESRI, 2008.
3. Image Sources: © St. Clair Region Conservation Authority, 2006 - Imagery Date: 2006.

* Locations of existing pipelines are approximate

Stantec

September 2010
160960611

Client/Project
ENBRIDGE GAS DISTRIBUTION INC.
NEXUS PROJECT

Figure No.
1

Title
LOCATION MAP

AGENCY RESPONSES FOR THE PROPOSED ENBRIDGE DOW MOORE, CORUNNA AND SECKERTON PIPELINE PROJECT		
Agency	**Comment**	**Response**
St. Clair Region Conservation Authority – Chris Durand, October 26, 2010, Letter	Portions of the property are within the "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses" Regulation Also, may be affected by County tree-cutting by-law	Not Required
Ministry of Natural Resources – Mary-Jo Tait, (519) 773-9241 ext. 4786, October 26, 2010 Telephone correspondence (original letter mailed Oct. 13, 2010)	Please forward results of your NHIC search and site map (she was forwarded the package internally and cannot read the map). No response to-date	Map and NHIC results were emailed on October 26, 2010
Township of St. Clair - Gary De Pooter, October 28, 2010 Questionnaire response	Pipeline crossing agreement c/w fees for road and municipal drain crossings	EGDI to contact Twp. to obtain permits
County of Lambton – Ezio Nadalin, November 4, 2010 Telephone correspondence Subsequent follow up calls	Please resend project information Tree cutting permit required No further response to-date	EGDI will comply with the intent of the tree cutting by-law
Ministry of Transportation –Conor Byrne, November 15, 2010 Telephone correspondence	No MTO roads are affected. There will likely be no further comment	Not Required

Appendix C

Stage 1 Archaeology Report

The 2010 Stage 1 Archaeological Assessment of the Proposed Dow Moore, Corunna and Seckerton Pipeline Project, Township of St. Clair, Lambton County, Ontario

Submitted to

Stantec Consulting Ltd.,
Suite 1,
70 Southgate Drive,
Guelph, Ontario
N1G 4P5
Telephone – (519) 836-6050
Fax (519) 836-2493

and

The Ontario Ministry of Tourism and Culture

Prepared by

D.R. Poulton & Associates Inc.
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PIF # P316-093-2010

November 22, 2010

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Acknowledgments

This assessment was facilitated by the following individuals and their agencies:

- ***Terry Chupa,*** Lands Agent and Lands Contract Manager; Enbridge Gas Distribution Inc.;
- ***Steve Thurtell,*** M.Sc., P. Ag., Project Manager, Environmental Assessment, Stantec Consulting Ltd.;
- ***Shari Prowse***, Archaeological Review Officer, Culture Programs Unit, Ontario Ministry of Tourism and Culture; and
- ***Robert von Bitter***, Archaeological Data Coordinator, Culture Services Unit, Ontario Ministry of Tourism and Culture.

Executive Summary

Stantec Consulting Ltd. (Stantec) has been retained by Enbridge Gas Distribution Inc. (EGDI) to prepare an Environmental and Socio-Economic Assessment Report for a project involving approximately 3,500 metres of buried natural gas pipelines south of Sarnia, Ontario. The construction project proposed by EGDI is named the Dow Moore, Corunna and Seckerton Pipeline Project. It is part of the ongoing expansion of the gas storage system in St. Clair Township and is required to meet increasing demand for natural gas service in the area. On November 5, 2010, Stantec contracted D.R. Poulton & Associates Inc. to carry out a Stage 1 archaeological background study of the proposed undertaking.

The archaeological assessment considered data for two alternative alignments, designated Potential Route 1A and Potential Route 1B. In addition to constructing either Potential Route 1A or Potential Route 1B, the Dow Moore, Corunna and Seckerton Pipeline Project will include the construction of Proposed Route 2. It was also considered by the archaeological assessment.

One objective of the assessment was to obtain information on the presence or absence of past investigations and previously documented sites within the study area. A second was to determine the relative potential of the study area and the three pipeline routes to contain as-yet undiscovered archaeological resources that could represent potential constraints for the proposed construction.

The report is divided into six sequential sections. The present section provides a general introduction to the assessment. The location and description of the study area and the routes under consideration are detailed in Section 2.0 of the report. Section 3.0 is a cultural synthesis of the region within which the study area is situated. Section 4.0 describes the methods and results of the Stage 1 background study. Section 5.0 details the recommendations that arose from the assessment. Finally, Section 6.0 presents the references cited in this report.

The check of the Archaeological Sites Database of the Ministry of Tourism and Culture confirmed that no registered archaeological sites were located within a two kilometre radius surrounding the study area defined by Stantec for purposes of the Environmental and Socio-Economic Assessment Study. However, the results of the background study also determined that the lands involved in the Dow Moore, Corunna and Seckerton Pipeline Project have a moderate potential for Native and Euro-Canadian archaeological remains. In view of that, it is recommended that a Stage 2 survey be carried out once the exact alignments for the proposed pipelines have been finalized.

The survey will have two objectives. One will be to effect a field-based assessment of the lands subject to impact from the proposed pipeline construction. The other will be to confirm the presence or absence of archaeological sites subject to potential impact from the construction.

Based on the results of the Stage 1 archaeological background study, it is recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Provincial registry of archaeological reports. It is also recommended that the letter include a statement of concurrence with the findings of the Stage 1 archaeological assessment. Finally, it is requested that a copy of the letter be forwarded to Steve Thurtell, Project Manager, Environmental Management, Stantec Consulting Ltd. His e-mail address is steve.thurtell@stantec.com.

1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) has been retained by Enbridge Gas Distribution Inc. (EGDI) to prepare an Environmental and Socio-Economic Assessment Report (ER) for a project involving approximately 3,500 metres of buried natural gas pipelines south of Sarnia, Ontario. The construction project proposed by EGDI is named the Dow Moore, Corunna and Seckerton Pipeline Project. The project is part of the ongoing expansion of the gas storage system in St. Clair Township and is required to meet increasing demand for natural gas service in the area. On November 5, 2010, Stantec contracted D.R. Poulton & Associates Inc. to carry out an archaeological assessment of the proposed undertaking.

The technical guidelines for archaeological assessment formulated by the Ontario Ministry of Culture, Tourism and Recreation (now Ministry of Tourism and Culture) (MCTR 1993) define up to four sequential stages in an archaeological assessment. The same applies to new standards and guidelines formulated by the Ministry of Tourism and Culture (2010), which will come into effect on January 1, 2011. Stage 1 consists of background research to identify any past archaeological investigations or known sites. The background study also identifies the potential for as-yet undiscovered sites. Stage 2 consists of a field survey to confirm the presence or absence of archaeological sites. Stage 3 consists of a more detailed assessment of any sites that are of demonstrable or potential significance as heritage resources and planning concerns. Finally, Stage 4 consists of the mitigation by salvage excavation of any significant sites that are subject to impact from a potential development and cannot be mitigated by preservation and avoidance. The present assessment of the Dow Moore, Corunna and Seckerton Pipeline Project consisted of a Stage 1 background study as defined by the standards and guidelines.

The report is divided into six sequential sections. The present section provides a general introduction to the assessment. The location and description of the study area and the three routes under consideration for the proposed pipelines are detailed in Section 2.0 of the report. Section 3.0 is a cultural synthesis of the region within which the study area is situated. Section 4.0 describes the methods and results of the Stage 1 background study. Section 5.0 details the recommendations that arose from the assessment. Finally, Section 6.0 presents the references cited in this report.

One objective of the assessment was to obtain information on the presence or absence of past investigations and previously documented sites within the study area. A second was to determine the relative potential of the study area and the three pipeline routes to contain as-yet undiscovered archaeological resources that could represent potential constraints for the proposed pipelines.

The Stage 1 archaeological assessment of the Dow Moore, Corunna and Seckerton Pipeline Project was carried out under Archaeological Consulting Licence # P316, issued by the Ontario Ministry of Tourism and Culture to Sherri Pearce of DPA. The Ministry designated the project as PIF # P316-093-2010.

The archaeological assessment was carried out in accordance with the provisions of the Ontario Heritage Act (Government of Ontario 1990), and with the draft technical standards and guidelines for archaeological assessments formulated by the Ministry of Tourism and Culture (2010).

Permission for access to conduct a visual examination of the pipeline routes was granted by the landowners. The records pertaining to this project are currently housed in the corporate offices of D.R. Poulton & Associates Inc. In the event the opportunity arises, however, the project archive will be transferred to a suitable long-term repository. Potential repositories include local and other museums and the archaeological repository maintained by the London office of the Ontario Ministry of Tourism and Culture.

2.0 LOCATION AND DESCRIPTION

The project comprises two pipelines with two small tie-in sections. One pipeline involves the construction of a gathering pipeline, approximately 1,500 m long and 508 mm (20 inches) in diameter, within the Seckerton pool. The other project includes the construction of approximately 1, 900 m of 20 inch (50.8 cm) diameter steel pipeline to connect the existing Dow Moore gathering line to two new meter stations to be built at the Corunna and Seckerton natural gas storage pools. Also, the first tie-in is approximately 50 m in from the 20 inch diameter steel pipeline to tie-in the Seckerton pool line to the new metering station to be built at the Seckerton natural gas storage pool. Finally, the second tie-in is approximately 50 m of 16 inch diameter steel pipeline to tie-in the Corunna pool line to the new metering station to be built at the Corunna natural gas storage pool. The Stantec ER was created to meet the requirements of the Ontario Energy Board's ("OEB") Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon pipelines and facilities in Ontario (May 2003).

For purposes of the Environmental and Socio-Economic Assessment, Stantec Consulting Ltd. defined a study area surrounding the project. It is located in the area west of Tecumseh Road, south of Petrolia Line, and contained within the area approximately 600 m south of Rokeby Line and 500 m west of Ladysmith Road. The properties screened to locate existing environmental features are located in Lambton County. They involve parts of Lots 19, 20, 21 and 22 in Concessions 8, 9 and 10 of Moore Township.

The aerial photograph presented as Figure 1 of this report shows the location of the study area that was defined by Stantec for purposes of the Environmental and Socio-Economic Assessment Study. It also shows the routes that are under consideration for the proposed pipelines. As illustrated in Figure 1, an east-west oriented woodlot complex is located within the study area; it straddles the line between Concession 9 and Concession 10. Natural gas storage wells are located in clearings within the central portion of the woodlot and in the agricultural fields that flank it to the north and south. Two additional wells are located in the south-central portion of the study area, south of Rokeby Road. There are some 36 active natural gas wells in the storage pool. There is also one plugged back and whipstocked well.

Potential Route 1A and Potential Route 1B both extend from the Dow Moore Tie-In on the east side of Ladysmith Road east and north to the Corunna Tie-In. Potential Route 1A is the preferred route. It is colour-coded yellow in Figure 1. As illustrated, the alignment for Potential Route 1A extends from the Dow Moore Tie-In eastward a distance of approximately 500 metres following the south edge of the woodlot. The eastern part of this segment also follows the east-west segment of an existing Enbridge Gas gravel access road that originates on Rokeby Line. In addition, the remainder of the alignment of Potential Route 1A also parallels existing Enbridge Gas gravel access roads. At a point where the main access road bends north the alignment of Potential Route 1A also turns north, following the alignment of the existing Seckerton Gathering Line and the access road to the north edge of the woodlot. From that point it extends eastward, with a northward jog, following the edge of the woodlot. It then bends north, following the access road and the boundary between two agricultural fields, before turning eastward. As stated above, it terminates at the Corunna Tie-In, at a point adjacent to the existing Corunna Gathering Line.

Potential Route 1B is colour-coded pink in Figure 1. As illustrated, the alignment of Potential Route 1B extends from the Dow Moore Tie-In eastward a distance of approximately 1430 metres. It generally follows the south edge of the woodlot but also includes a segment approximately 170 metres long that transects a southern extension of the woodlot. A segment of this east-west alignment approximately 280 metres long also parallels the east-west segment of the existing Enbridge Gas gravel access road that originates on Rokeby Line. At the east end of the east-west segment Potential Route 1B turns north, following a gap in the woodlot that contains a hydro transmission line with a single row of steel towers. The last two segments of the route continue to follow the hydro transmission corridor, first along the west edge of a northern extension of the woodlot, then along the access road and the boundary between two agricultural fields to the terminus at the Corunna Pipeline.

In addition to constructing either Potential Route 1A or Potential Route 1B, the Dow Moore, Corunna and Seckerton Pipeline Project will include the construction of Proposed Route 2. Proposed Route 2 is colour-coded green in Figure 1. It follows the alignment of the existing Seckerton Gathering Line. The southernmost segment of Proposed Route 2 extends in a northwesterly direction from a point in an agricultural field approximately 170 metres south of Rokeby Line. The alignment crosses Rokeby Line, then bends in a north-northwesterly direction, extending across country through agricultural fields and then through the woodlot. The segment through the woodlot follows the existing Enbridge Gas gravel access road that originates on Rokeby Line. Proposed Route 2 terminates at the point where the access road intersects the north edge of the woodlot.

The archaeological assessment was informed by a visual examination of the three pipeline routes. It was carried out by Nancy VanSas of D.R. Poulton & Associates Inc. on November 11, 2010. The visual examination was assisted by Terry Chupa, Lands Agent and Lands Contract Manager; Enbridge Gas Distribution Inc., who met with VanSas to show her the alignments under consideration.

Plates 1-6 inclusive illustrate existing conditions along the proposed and alternative pipeline alignments. Plate 1 is a view of the western segment of Potential Routes 1A and 1B looking west, with the woodlot to the right and the field in winter wheat to the left. Plate 2 is a view of the segment of Potential Route 1A looking north along the segment of the route that follows the access road through the woodlot, with the row of wooden hydro poles to the right. Plate 3 is a view of the segment of Potential Route 1A looking west along the access road, with the woodlot to the right and the ploughed field to the left. Plate 4 is a view of the segment of Potential Route 1B that follows the row of the steel hydro transmission tower through the weed-covered gap in the woodlot, looking north. Plate 5 is a view of the east end of Potential Route 1A, looking east toward Tecumseh Road. Finally, Plate 6 is a view of Proposed Route 2 looking south-southeast across the field toward Rokeby Line.

The topography in the study area is flat. The closest stream course to the alternative pipeline routes is Baby Creek. It is a tributary of the St. Clair River and is situated 2.5 kilometres west of the study area. The St. Clair River itself is situated 4.5 kilometres west of the study area. The study area for the proposed Dow Moore, Corunna and Seckerton Pipeline Project forms part of the St. Clair Clay Plains physiographic region (Chapman and Putnam 1984: 147). As described by Chapman and Putnam, it covers a surface area of 2,270 square miles, was flooded by glacial Lakes Whittlesey and Warren and is characterized by little relief.

3.0 STAGE 1 BACKGROUND RESEARCH

3.1 Methods

The first stage of the assessment consisted of background research. This was conducted in order to:

- *amass all of the readily available information on any previous archaeological surveys in the area;*
- *determine the locations of any registered and unregistered sites within and adjacent to the property;*
- *identify areas of archaeological potential which represented concerns for Stage 2 field survey; and*
- *develop an historical framework for assigning levels of potential significance to any new sites discovered during fieldwork.*

The framework for assigning levels of potential archaeological significance is drawn from provincial environmental assessment guidelines (Weiler 1980). It includes the identification and evaluation of any feature that has one or more of the following attributes:

> *it has the potential through archaeological exploration, survey, or fieldwork to provide answers to substantive questions (i.e. relate to particular times and places) about events and processes that occurred in the past and therefore add to our knowledge and appreciation of history;*
>
> *it has the potential through archaeological exploration, survey and fieldwork to contribute to testing the validity of general anthropological principles, cultural change and ecological adaptation, and therefore to the understanding and appreciation of our man-made heritage; or*
>
> *it is probable that various technical, methodological, and theoretical advances are likely to occur during archaeological investigation of a feature, alone or in association with other features, and therefore contribute to the development of better scientific means of understanding and appreciating our man-made heritage (Weiler 1980:8).*

Two collective sources were examined during the Stage 1 assessment. The first was the Archaeological Sites Database of the Ministry of Tourism and Culture. It houses site record forms for registered sites as well as published and unpublished reports on past surveys, assessments and excavations. D.R. Poulton & Associates submitted a site data request to the Ministry of Tourism and Culture. In the interests of context, the site data request included a two kilometre radius surrounding the study area defined by Stantec for purposes of the Environmental and Socio-Economic Assessment Study.

The second collective source for the Stage 1 research was the library/archives of D.R. Poulton & Associates Inc. It includes an extensive inventory of published and unpublished reports, as well as inventories of registered and unregistered archaeological sites in the area.

In addition to the above, other sources were examined to identify the potential for Euro-Canadian sites. They included the reprint of the Illustrated Historic Atlas of Lambton County (Belden & Co. 1880).

The above sources included some documentation on potential Euro-Canadian archaeological planning concerns. They were supplemented by reference to two other sources that contain information on the historic cultural resources of area. One is the history of Lambton County by Elford (1982). The other is the reprint of the Illustrated Historic Atlas of the County of Lambton Ontario 1880 (Phelps 1973).

3.2 Results

The background research obtained information of relevance to the potential for historic and prehistoric sites within the study area containing the alternative pipeline routes. For reference purposes, a cultural chronology of the region is presented in Table 1.

The results of the Stage 1 study may be divided into two separate but related categories: information on past archaeological investigations and known sites in the study area; and information on the history of land use in the area. These will be considered in turn.

Past Archaeological Investigations and Known Sites

The check of the Archaeological Sites Database of the Ministry of Tourism and Culture confirmed that no registered archaeological sites were located within a two kilometre radius surrounding the study area defined by Stantec for purposes of the Environmental and Socio-Economic Assessment Study.

The Ministry of Tourism and Culture does not maintain a database of properties that have had past archaeological investigations. In consequence, the only way a consulting archaeologist will know that a past assessment has been conducted in a given area is if he or she has personal knowledge of it, or if the assessment resulted in the discovery and registration of one or more archaeological sites.

In the present case, the personnel of D.R. Poulton & Associates have knowledge of two related past archaeological assessments in the immediate area of the Dow Moore, Corunna and Seckerton Pipeline Project. The first consisted of a 2006 Stage 1 background study of the proposed St. Clair Energy Centre, which was located directly north of Petrolia Line, just east of Ladysmith Line. It was conducted by Timmins Martelle Heritage Consultants Inc. (2006).

The second archaeological assessment that was carried out in the immediate area of the proposed Dow Moore, Corunna and Seckerton Pipeline consisted of a 2006 Stage 1 background study and 2007 survey of the proposed Invenergy Natural Gas Pipeline. This proposed pipeline was

required to provide natural gas to the aforementioned proposed St. Clair Energy Centre. The Stage 1-2 assessment of the proposed Invenergy Pipeline was undertaken on behalf of Stantec Consulting Ltd. by D.R. Poulton & Associates Inc. (2006, 2007). The alignment of the proposed pipeline in question extended a distance of four kilometres, from the Petrostar Station north and east to the Dow Station. As such, the study area for the 2006-2007 assessment was north of and directly adjacent to Stantec's study area for the Environmental and Socio-Economic Assessment. In addition, it overlapped the expanded study area for the present archaeological assessment of the proposed Dow Moore, Corunna and Seckerton Pipeline Project.

Table 1 Cultural Chronology for Southwestern Ontario

PERIOD	GROUP	TIME RANGE	COMMENT
PALEO-INDIAN			
	Fluted Point	9500 - 8500 B.C.	Big game hunters small nomadic groups
	Hi-Lo	8500 - 7800 B.C.	
ARCHAIC			
Early	Nettling	7800 - 7000 B.C.	Nomadic hunters and gatherers
	Bifurcate Base	6800 - 6000 B.C.	
Middle	Laurentian	6000 - 2000 B.C.	Transition to territorial settlements
Late	Lamoka	2500 - 1700 B.C.	Polished/ground stone tools
	Broad Point	1800 - 1400 B.C.	
	Crawford Knoll	1500 - 500 B.C.	
	Glacial Kame	*ca*. 1000 B.C.	Burial ceremonialism
WOODLAND			
Early	Meadowood	1000 - 400 B.C.	Introduction of pottery
	Red Ochre	1000 - 500 B.C.	
Middle	Couture	300 B.C. - A.D. 500	Long distance trade networks
Late	Rivière au Vase	A.D. 500 - 900	Incipient horticulture
	Younge Tradition	A.D. 900 - 1300	Transition to village life and agriculture
	Springwells	A.D. 1300 - 1400	Large village sites
	Wolf	A.D. 1400 - 1550	Tribal differentiation and warfare
HISTORIC			
Early	Historic Native	A.D. 1700 - 1875	Social displacement
Late	Euro-Canadian	A.D. 1800 - present	European settlement

19th Century Land Use in the Vicinity of the Study Area

Figure 2 illustrates the location of the study area relative to a composite of the 1880 Historic Atlas maps of Sarnia Township and Moore Township (Phelps 1973). Although there was some Euro-Canadian settlement in the vicinity of the study area prior to the negotiation of treaties with the First Nations, concerted Euro-Canadian settlement in this part of Lambton County did not

begin until after 1825, when the British negotiated a major land treaty with the Chippewa who lived in southwestern Ontario. As a result of that treaty, 2,200,000 acres were surrendered to the British Crown. The area surrendered included the present study area as well as almost all of the rest of the northern part of Lambton County. It also included all of Perth County and parts of Waterloo, Wellington and Oxford Counties. This treaty was confirmed in a detailed survey of 1827, which also created four Native reserves, all of which were situated within Lambton County.

One of the reserves was the Sarnia (or St. Clair) Indian Reserve #45, which is located just north of the study area. This reserve was established by the Treaty of July 10, 1827. As stated in the Historic Atlas, it originally contained 10,280 acres, but through numerous surrenders to accommodate the southward industrial and residential expansion of Sarnia it had been reduced in size to 4,130 acres by 1973 (Phelps 1973:63). The original reserve fronted on the St. Clair River; the lands fronting on the river were among those that were eventually surrendered.

The Sarnia Reserve and the other reserves in Lambton County were initially occupied by solely by Chippewa; over time their populations were augmented by Pottawatamies, Ottawa and Shawnees. The townships that were also established by the 1827 survey were named in 1829. Moore Township, which contains the present study area, was named in honour of Sir John Moore, a British officer who was killed at the Battle of Corunna in 1809, during the Peninsular War.

The study area is located well north of the Detroit Frontier. Although what is now the Canadian side of the Detroit River was settled by the French in 1750, the Euro-Canadian settlement of the St. Clair River did not occur until some decades later. In the decades that preceded and followed the War of 1812 several French and British settlers established homesteads along the east bank of the St. Clair River in what is now Moore Geographic Township, renting land from the local Native population. They included John Courtney who settled on what is now Lot 39 north of Mooretown in 1804; he was the first English-speaking settler in all of Lambton County.

The earliest white settlers in Sarnia Township were a French-Canadian family by the name of La Forge. According to the Historic Atlas (Phelps 1973:8), they may have arrived as early as 1800, long before the Town of Sarnia came into being. Following the establishment of the Sarnia Reserve in 1827 an Indian agent, a clergyman and a school teacher lived on the reserve. In the 1820s these individuals and the La Forge family were the only non-Natives living in what was to become the City of Sarnia.

In the early 1830s the publication of a book by Dr. Tiger Dunlop of the Canada Company resulted in a wave of settlement in Sarnia Township by retired officers of the British army and navy. The first of these to arrive in the township was a ex-lieutenant of the British Royal Navy named Vidal; in 1832 he settled a 200-acre parcel in what by 1880 had become downtown Sarnia. Initially, the settlement was known as The Rapids; in 1836 it was renamed Port Sarnia.

Soon after he arrived in 1832, Vidal opened a tavern on his property; it was the first tavern on the St. Clair frontier. By 1835 Sarnia had a wharf, two stores and two inns, a frame house, several log houses and several log shanties. One of the commercial establishments was a two-storey log inn. It had a sign which read “INN” and came to be known as the “double N-I” as the person who put up the sign was illiterate and had nailed it to the building upside down (Phelps 1973:9).

Growth in Sarnia proceeded slowly in the first few decades but by 1853 the town had a population of 800.

Reference to Figure 2 shows that by the third quarter of the 19th century agricultural settlement had been established through the present study area. The area which contains the proposed Dow Moore, Corunna and Seckerton Pipeline Project was rural as of the third quarter of the 19th century. With the exception of petro-chemical facilities and underground natural gas storage pools and transmission lines, much of the study area remains rural to this day.

As illustrated in Figure 2, reference to the 1880 Historic Atlas maps shows that the study area was not located in close proximity to any 19th century communities. The closest community to the study area by the third quarter of the 19th century was Corunna. Located on the St. Clair River, the east edge of the community was situated 3.5 kilometres west of the study area as of 1880.

The genesis of Corunna dates back to 1823 when Viscount Beresford, a veteran of the Napoleonic War, selected it as the proposed site for the joint capitol of Upper and Lower Canada (Elford 1982:61). Beresford named it for the 1809 Battle of Corunna in which he had fought. The plans for the joint capitol were soon scrapped. A town site was laid out at Corunna in 1836 but as late as the mid 1840s there were few settlers. John C. Geike, who lived in nearby Mooretown from 1841 to 1849, wrote a description of early Corunna in his book "*Life in the Woods*". He noted that Corunna stood on the west side of a swampy belt, and that a man had excavated a broad ditch from the swamp to the river to provide water power for his mill. Over time the swamp dried up and became good land (Elford 1982:61). It was not until the 1850s and 1860s that Corunna really developed as a community of any size. By 1869 it had a population of 200.

It should be noted that the township maps in the 1880 Historic Atlas only illustrate the locations of the homes of subscribers. In consequence, they are potentially misleading as a visual indication of the extent of rural settlement in the third quarter of the 19th century. That said, the 1880 Historic Atlas map of Moore Township map depicts four farmsteads within the limits of the study area defined by Stantec for the proposed Dow Moore, Corunna and Seckerton Pipeline Project (Figure 2). One was the Peter Gallogley farmstead in the north end of Lot 22, Concession 9. A second and third are W. J. Courtney and Jas. Cruikshank farmsteads in the north end of Lot 20, Concession 8. Jno Robinson is also identified as having a farm in Lot 22, Concession 8 and Henry McGurk is identified as having a farm in the south half of Lot 22, Concession 9. However, no farmstead is depicted for the Robinson property and the farmstead for the McGurk property was located in Lot 23, outside of the present study area.

The 1880 Historic Atlas map of Moore Township also shows three institutional buildings within the study area for the proposed pipelines. Two are schools: one located in the northeast corner of Lot 21, Concession 10; the other in the southwest corner of Lot 21, Concession 9. The third institutional building is a Templars Hall. It was located in the northeast corner of Lot 19, Concession 8 and was one of two Templars halls in this area to service the local population of Freemasons. Other commercial and institutional buildings were located in Corunna, to the west of the study area, but they are not depicted on the 1880 Historic Atlas map of Moore Township. By the 1860s they included four churches, five carpenters' shops, three general stores, three shoemakers, two blacksmith shops, two tailors, two taverns, a brewery and a grist mill and saw mill (Elford 1982:61-64). Still other businesses were added to the community in the 1870s.

4.0 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

There are two basic categories of archaeological resources for any given property. The first consists of known sites that are of demonstrable or potential significance as cultural resources and planning concerns. The second consists of the potential for as-yet undiscovered sites. These two categories will be addressed in turn.

4.1 Known Sites of Demonstrable or Potential Significance

The original framework for assigning levels of archaeological significance in Ontario was drawn from Provincial environmental assessment guidelines (Weiler 1980). The information included the identification and evaluation of any site that met one or more of the following criteria:

> *it has the potential through archaeological exploration, survey, or fieldwork to provide answers to substantive questions (i.e. relate to particular times and places) about events and processes that occurred in the past and therefore add to our knowledge and appreciation of history;*
>
> *it has the potential through archaeological exploration, survey, and fieldwork to contribute to testing the validity of general anthropological principles, cultural change and ecological adaptation, and therefore to the understanding and appreciation of our man-made heritage; or*
>
> *it is probable that various technical, methodological, and theoretical advances are likely to occur during archaeological investigation of a feature, alone or in association with other features, and therefore contribute to the development of better scientific means of understanding and appreciating our man-made heritage (Weiler 1980:8).*

The document quoted above was prepared a quarter of a century ago and while the principles it was based upon are still current, some of the language is now dated, including phrases such as "*man-made*". The issue of archaeological site significance is also covered in a more recent publication entitled *Conserving a Future for Our Past: Archaeology, Land Use & Development in Ontario* (Ministry of Citizenship, Culture and Recreation 1997). As stated in that document, the key factors an archaeologist considers in evaluating the significance of an archaeological site include the following:

1. The Integrity of the site (e.g. is it in pristine or near pristine condition; despite past disturbances; can important data still be recovered from it?).

2. The Rarity or Representativeness of the site (e.g. is it one of a kind, locally, regionally or provincially; is it a good comparison to similar sites from other regions, etc?).

3. The Productivity of the site (e.g. does it have the potential to contain large quantities of artifacts or exceptionally detailed data about what occurred there; etc?).

4. The Age of the site.

5. The Potential for Human Remains within the site.

6. The Geographic or Cultural Association (e.g., does the site have a clear and distinct relationship with the surrounding area or to a particular geographic feature, such as a unique rock formation, historic transportation corridor, etc.; is the site associated with a distinctive cultural event, ceremony or festival, etc.?).

7. The Historic Significance of the site (i.e., is the site associated with a renowned event, person or community?).

8. Community Interest (e.g., is the site important to a particular part of the community; does it represent a significant local event; etc.?).

In the present case, and as previously described, the background study determined that no archaeological sites have been registered within a two-kilometre radius surrounding the study area that Stantec defined for purposes of the Environmental and Socio-Economic Assessment. Accordingly, possible archaeological planning concerns for the proposed Dow Moore, Corunna and Seckerton Pipeline Project were limited to the potential for as-yet undiscovered sites. That potential is discussed below.

4.2 Potential for as-yet Undiscovered Sites

Since the mid 1980s several models have been generated in an attempt to quantify archaeological potential in southern Ontario (e.g., Peters 1986, Pihl 1986). The results consistently show that distance to water is the single most reliable indicator of pre-contact and historic land use and settlement. The degree of inferred archaeological potential varies somewhat with the significance of the water course. Accordingly, the land use primer developed by the Ministry of Citizenship, Culture and Recreation (1997:12-13) identifies a high potential for First Nations sites within 300 metres of a primary water source, including relic shorelines, and within 200 metres of a secondary water source. The primer also includes other site potential criteria, as follows:

- The presence of a known archaeological site within 250 metres of a proposed development;

- The presence of knolls, ridges or other elevated topography within a property;

- The presence of well-drained sandy soils;

- The presence of distinctive or unusual landforms such as waterfalls, rock outcrops, rock faces, caverns, glacial erratics, etc. which often represented special or spiritual places to First Nations peoples;

- The presence of particular resource-specific features that would have attracted past subsistence or extractive land use, such as chert outcrops important to First

Nations peoples and of white pine stands important to early Euro-Canadian logging;

- The presence of initial non-Aboriginal (primarily but not exclusively Euro-Canadian) military or pioneer settlement;
- The presence of early transportation routes such as a trail, pass, road, rail, portage route or canal;
- The presence of one or more properties designated under the Ontario Heritage Act.
- The association of the property or site with historic events, activities or occupations.

The requirement for an archaeological assessment of a proposed development is triggered by one or more of the above criteria. In the present case, two of them apply to the subject lands. One is the fact that the tablelands of the study area formed part of farms as of 1880, when the Historic Atlas was published. As such, they consist of soils that would have been suitable to both Aboriginal and Euro-Canadian agriculture.

A second positive archaeological criterion is that Proposed Route 2 transects Rokeby Line, which formed part of the historic road network in this township, and 19th century farmsteads and other structures were often closely oriented to the road network.

All things considered, the background study indicated that the lands involved in the proposed undertaking have moderate potential for as-yet undiscovered archaeological remains. Given the lack of topographic relief and of stream courses in the immediate area, the potential for First Nations sites in the study area primarily applies to less substantial sites such as lithic scatters and isolated finds.

The potential for Euro-Canadian sites is inferred to be highest for homesteads and farmsteads rather than for commercial, institutional and industrial sites. The reason is that the subject lands are somewhat removed from crossroads, and commercial, institutional and industrial sites have a tendency to be concentrated on crossroads.

5.0 RECOMMENDATIONS

As detailed in Section 4.0 of this report, the results of the background study indicate that the lands involved in the Dow Moore, Corunna and Seckerton Pipeline Project have a moderate potential for Native and Euro-Canadian archaeological remains. In view of that, it is recommended that a Stage 2 survey be carried out once the exact alignments for the proposed pipelines have been finalized.

The survey will have two objectives. One will be to effect a field-based assessment of the lands that will be subject to impact from the proposed pipeline construction. The other will be to confirm the presence or absence of archaeological sites subject to potential impact from the construction. If sites are confirmed to be present, the survey will include an assessment of their significance as archaeological resources, and the extent to which they could represent potential constraints to the proposed construction.

If the survey is to be carried out in the spring of 2011 and if some of the segments fall within fields that were planted in winter wheat in the fall of 2010, it is further recommended that the survey be conducted early in the field season, before the winter wheat grows too thick and high to permit a proper examination of the ground surface.

Under the Ontario Heritage Act (1990), it is a requirement of archaeological consulting licences that consultants prepare and submit assessment reports to the Ontario Ministry of Tourism and Culture. Archaeological Review Officers of the Ministry then review each report to ensure that the assessment and the report satisfy consulting licence requirements under the Act and other pertinent legislation, and that they conform to current archaeological standards and guidelines. If the report and the assessment do so conform, the pertinent Archaeological Review Officer then issues a letter confirming that and accepting the report into the Provincial registry of archaeological reports.

In the present case, it is recommended that the Ministry of Tourism and Culture issue a letter accepting the present report into the Provincial registry of archaeological reports. It is also recommended that the letter include a statement of concurrence with the findings of the Stage 1 archaeological assessment. Finally, it is requested that a copy of the letter be forwarded to Steve Thurtell, Project Manager, Environmental Management, Stantec Consulting Ltd. His e-mail address is steve.thurtell@stantec.com.

The above concludes the general and site-specific recommendations of this report. Nevertheless, it should be emphasized that no archaeological survey can be considered to totally negate the potential for deeply buried cultural remains, including human burials. In recognition of that fact, the archaeological assessment technical guidelines formulated by the Province of Ontario require that all reports on archaeological assessments include recommendations to address the possibility that deeply buried remains may be encountered during construction (MCTR 1993:12).

In accordance with the above, it is recommended that archaeological staff of the Ontario Ministry of Tourism and Culture be notified immediately if any deeply buried archaeological remains should be discovered during the construction of the pipelines. In the event that human remains

should be encountered, it is similarly recommended that Stantec Consulting Ltd., Enbridge Gas Distribution Inc. and/or the contractor immediately contact Shari Prowse, Archaeological Review Officer with the London office of the Ontario Ministry of Tourism and Culture (telephone #519 675-6898, e-mail address Shari.Prowse@ontario.ca) and Michael D'Mello, the Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Ontario Ministry of Consumer Services (telephone #416 326-8404, e-mail address Michael.D'Mello@ontario.ca).

6.0 REFERENCES CITED

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1980 **Guidelines on the Man-Made Heritage Component of Environmental Assessments.** Historical Planning and Research Branch, Ministry of Culture, Tourism and Recreation, Toronto.

FIGURES

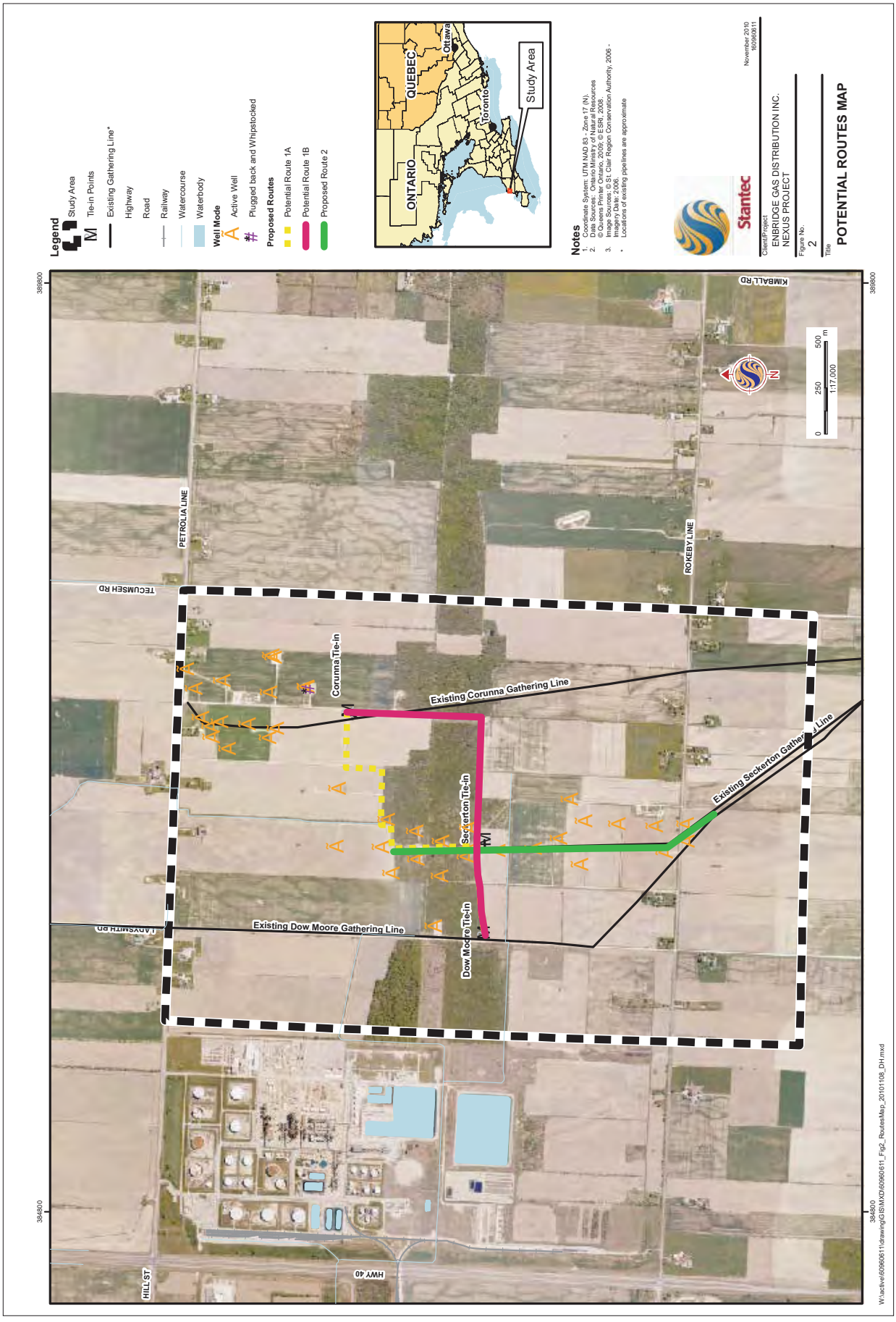

Figure 1 Detail of the Preferred and Alternative Pipeline Routes

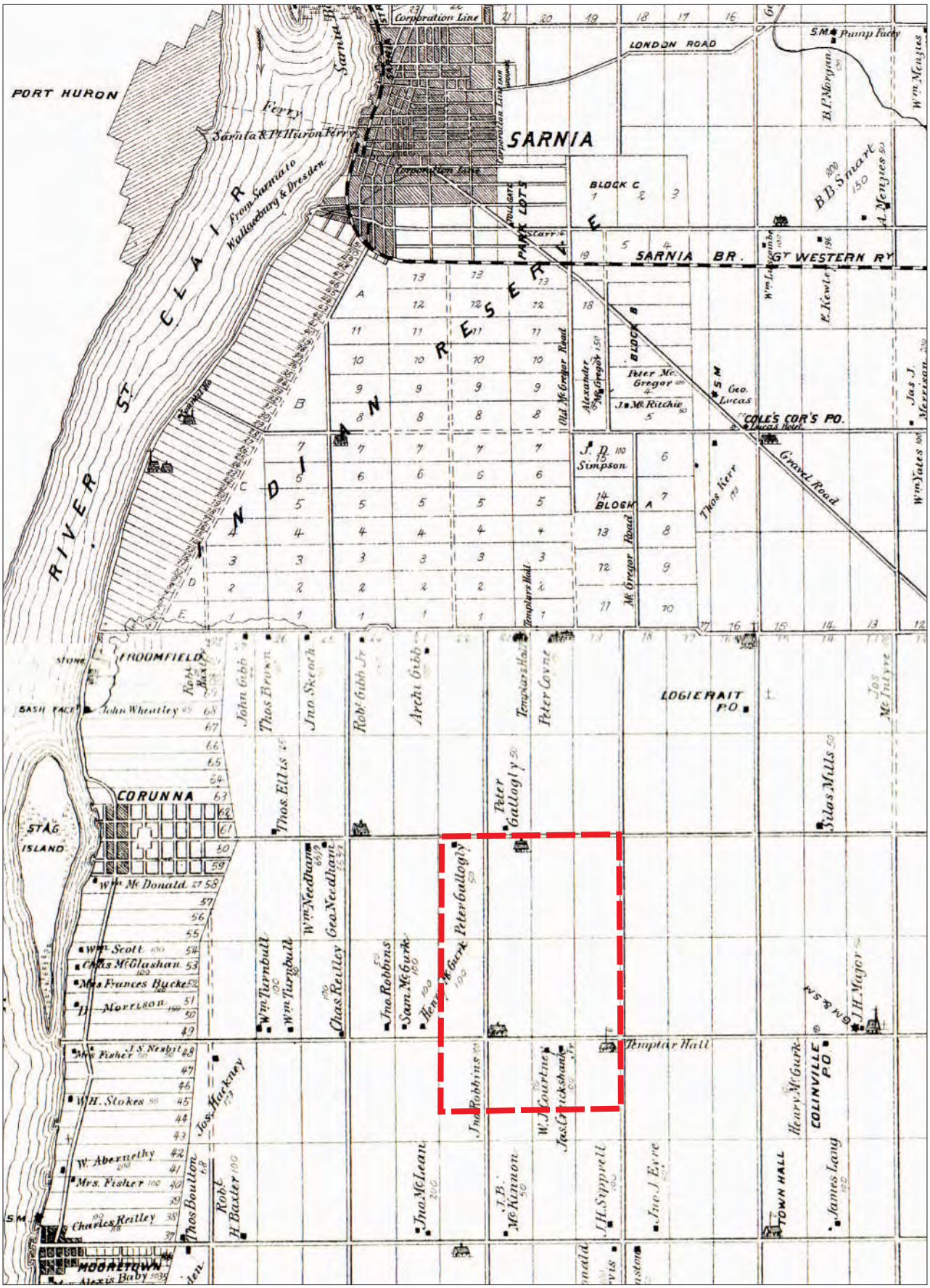

Figure 2 Facsimile of the 1880 Historical Atlas Map of Moor & Sarnia Townships

PLATES

Plate 1

Plate 2

Plate 3

Plate 4

Plate 5

Plate 6

Stantec Consulting Ltd.
Suite 1 - 70 Southgate Drive
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

December 16, 2010
File: 160960611

Enbridge Gas Distribution Inc.
500 Consumers Road
North York, ON M2J 1P8

Attention: Edwin Makkinga

Dear Edwin:

Reference: Dow Moore, Corunna and Seckerton Pipeline Project Environmental Report Addendum

This letter provides an addendum to the recently completed Environmental Report (ER), Dow Moore, Corunna and Seckerton Pipeline Project as proposed by Enbridge Gas Distribution Inc. (EGDI), dated November, 2010. The addendum is necessary to incorporate relevant environmental information concerning the study area which was received from the Ontario Ministry of Natural Resources (MNR) after finalizing the ER.

Stantec initiated contact with all agencies, including the MNR, on October 13, 2010. The contact letter requested that agencies responses be provided prior to October 22, 2010. All data received by November 26, 2010 was incorporated into the Final ER which is when it was finalized.

The review and collection of published environmental information incorporated into the ER identified 22 species of conservation concern that could potentially occur in the Study Area. To address the protection of wildlife populations, the ER states that vehicle movement and equipment storage should be confined to access roads and pipeline easements/work areas and that every effort should be taken to not harm local wildlife and to minimize any impact to wildlife. As well, the Migratory Bird Act was recognized and incorporated into the ER restricting clearing activities from occurring between within April 15th and August 15th. In the event that clearing during this time is unavoidable, the ER recommends that a qualified ornithologist conduct a nesting survey prior to the construction.

The ER recognizes the significance of the woodlands in the area and includes: avoidance to the extent possible by routing within agriculture fields; a comparison of the amount of tree cutting required; and a 2 to 1 replacement of trees removed. As well, the ER recognizes the presence of oil and gas infrastructure in the area and states that the proposed pipelines do not have any impact on other petroleum resources.

To help expedite the receipt of data, the results of Stantec's search of the MNR Natural Heritage Information Centre (NHIC) database were forwarded to the MNR on October 26, 2010 in response to their request made during a follow-up conversation.

Stantec

Reference: Dow Moore, Corunna and Seckerton Pipeline Project Environmental Report Addendum

Since finalization of the ER, information relevant to the Study Area has been provided by the MNR (see attachment). Similar to the above discussion, the MNR stated the NHIC information that was forwarded identified species of conservation concern potentially in or near the study area. The NHIC search identified 22 species of conservation concern, 5 of which are protected under the provincial Endangered Species Act (2007). The Common Five-lined Skink (endangered) was recorded in the vicinity of the Study Area in 1934 and the Massasauga (threatened) in 1962. Both are considered historical records; recent reports suggest these species are not anticipated to occur in the vicinity of the Study Area (COSEWIC 2002, COSEWIC 2007). Records of three vascular plant species at risk were more recent, suggesting they may occur in the vicinity of the Study Area. These species include colicroot (threatened), American columbo (endangered) and dense blazing star (threatened). One additional species at risk, the Butler's Gartersnake (threatened) was identified in MNR's consultation as a species that may occur within the Study Area.

The MNR has indicated that there is a need for field level studies to be conducted to investigate the potential for the presence of these species. Stantec and EGDI are currently communicating with the MNR to confirm the species requiring study and indentify appropriate methodologies and timelines for the studies. If the studies confirm the presence of a specific species or identifies significant wildlife habitat that requires special attention, mitigation measures will be developed and employed to address the protection of the individuals and/or the habitat.

The MNR recommends that site investigations be conducted by a qualified person to confirm potentially inaccurate or incomplete published information regarding petroleum infrastructure. The MNR also stated that further comments will come from the Petroleum Resources Centre, MNR. Stantec and EGDI will work to address any petroleum resource related comments when they are received.

Sincerely,

STANTEC CONSULTING LTD.

Steve Thurtell, B.Sc. Agr., M.Sc.
Project Manager, Environmental Assessment
Tel: (519) 836-6050
Fax: (519) 836-2493
sthurtell@stantec.com

Attachment: Ministry of Natural Resources email letter dated December 9, 2010.

From: Tait, Maryjo (MNR) [mailto:Maryjo.Tait@ontario.ca]
Sent: Thursday, December 09, 2010 4:17 PM
To: Thurtell, Steve
Cc: McCloskey, Amanda (MNR); Tait, Maryjo (MNR); Cairns, Melody (MNR)
Subject: RE: Dow Moore to Seckerton and Corunna Pipeline project

Good afternoon Steve,

We have received the information request for the Dow More, Seckerton and Corunna Interconnect Pipeline Project, south of Sarnia, Township of St. Clair, County of Lambton. We would like to provide the following in addition to the information provided in your NHIC search.

Species at Risk:
The *Endangered Species Act*, 2007 (ESA 2007) came into force on June 30, 2008 and provides both individual protection (section 9) and habitat protection (section 10) to species listed as endangered or threatened on the Species at Risk in Ontario (SARO) List. The current version of the SARO List (Ontario Regulation 230/08), issued under the ESA 2007, can be found on e-laws (http://www.e-laws.gov.on.ca/navigation?file=home&lang=en).

If an activity or project will result in adverse effects to species and/or habitat protected under the ESA 2007, an authorization under that Act would be required. Please note that authorizations are not guaranteed and that the review timelines for Authorization Request Packages can be lengthy.

The NHIC information that was forwarded identified SAR and S1 to S3 species, so there is a need to undertake field level surveys. This includes a 2 – 3 season vegetation survey and potentially cover board surveys for Butlers Gartersnake.

Site-specific investigation within and adjacent to the study area may find additional species and/or habitat location on or adjacent to the site.

Significant wildlife habitats
Significant wildlife habitat has may be present within the study area. Please consult the *Significant Wildlife Habitat Technical Guide,* (OMNR, 2000). Significant wildlife habitat is identified by planning authorities using the criteria and processes recommend in the Significant Wildlife Habitat Technical Guide (OMNR, 2000). Link to the guide:
http://www.mnr.gov.on.ca/en/Business/FW/Publication/MNR_E001285P.html The Natural Heritage Reference Manual (please see below) also provides guidance in section 9.0.

Significant woodlands:
It appears there are woodlands within the study area. Any assessments should consider the significant woodland, and should avoid natural heritage features first. The Natural Heritage Reference Manual contains information on significant woodlands that might be useful to your ER.

Significant wetlands:
The MNR has no identified wetlands within the study area. Site-specific investigation within the study areas may find existing wetlands that have not yet been evaluated or designated.

Significant valleylands:
The MNR does not possess significant valleylands mapping. We suggest you contact the Upper

Thames River Conservation Authority to find out if they have information pertaining to significant valleylands. The Natural Heritage Reference Manual (below) also provides guidance on evaluation criteria for determining significant valleylands that may be useful to this ER.

Petroleum Resources:

As you are aware, there are many records of wells within the study area. I have forwarded this project onto the Petroleum Resources Centre, MNR for a review. We will provide further comments.

The Oil, Gas and Salt Resources (OGSR) Library can be accessed for information about known well and pool locations (www.ogsrlibrary.com). However, the information above reflects only know wells. There is potential that wells may exist for which no records are held by the Petroleum Resources Centre or the information may be historically, inaccurate or incomplete.

Site investigations should be conducted to determine the status of the wells identified and any associated works. The investigation should be conducted by a person knowledgeable about the oil and gas industry. The proponent may be referred to the Ontario Petroleum Institute (OPI) to assist in locating such a person. The well locations should be examined for signs of an existing well or any associated works (e.g. wellhead, or well casing visible at surface, evidence of leaking fluids, gas odour, dead vegetation, etc) In addition, the study are should be examined for signs of any unrecorded wells.

Additional Information:

The MNR has released the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 Second Edition on April 22, 2010.
Link: http://www.mnr.gov.on.ca/en/Business/LUEPS/Publication/249081.html

The second edition of the Natural Heritage Reference Manual (the manual) provides technical guidance for implementing the natural heritage policies of the Provincial Policy Statement, 2005 (PPS). The manual represents the Province's recommended technical criteria and approaches for being consistent with the PPS in protecting natural heritage features and areas and natural heritage systems in Ontario. The manual provides guidance and criteria on natural heritage features, and on addressing impacts of development and site alteration. The criteria for determining significant features may be useful to your project.

I understand that you have accessed NHIC, I would also suggest you check LIO. Land Information Ontario (LIO) manages geographic information for use in maps and Geographic Information Systems (GIS). LIO has a web-accessible data warehouse that contains more than 250 different layers of geographic data. The data ranges from the location of underground wells to satellite imagery. LIO can be reached at (705) 755-1878.

Other areas where you may find information includes the Conservation Authority, and the Township of St. Clair Official Plan, County of Lambton Official Plan.

I hope the above is useful to you, please let me know if you require any additional information.

Have a great day,
Maryjo

Maryjo Tait
Planning Intern – Aylmer District
Ministry of Natural Resources
615 John Street North
Aylmer, ON N5H 2S8
Phone: (519) 773-4786
email: maryjo.tait@ontario.ca

From: Thurtell, Steve [mailto:steve.thurtell@stantec.com]
Sent: October 26, 2010 1:53 PM
To: Tait, Maryjo (MNR)
Subject: Dow Moore to Seckerton and Corunna Pipeline project

Hi Mary-Jo,
As discussed, Please find the NHIC search and the location map files attached.
I look forward to your response as a key component of the EA.
Thank you.
Sincerely, Steve.

Steve Thurtell, M.Sc., P. Ag.
Project Manager, Environmental Management
Stantec
Ph: (519) 836-6050 Ext. 208
Fx: (519) 836-2493
Cell: (519) 820-4237
steve.thurtell@stantec.com
stantec.com

C-FACILITIES

Filed: 2010-12-17
EB-2010-0302
Exhibit C
Tab 1
Schedule 1
Page 1 of 4

DESIGN SPECIFICATIONS

Description

1. The proposed 1,900 metres of NPS 20 steel pipeline for the Interconnect Pipeline will be installed within Lots 19, 20 and 21, Concessions 9 and 10 of the former Township of Moore, in St. Clair Township, in Lambton County. The preferred route for this pipeline passes through a woodlot, and a laneway previously installed by Enbridge, in Lot 21. Certain portions of the pipeline can be installed on either side of the exiting laneway. Prior to installation of the pipeline, the landowners and other interested parties will be consulted to determine the most practical location with regard to general farming operations, drainage tile systems and other relevant factors.

2. The proposed 1,500 metres of NPS 20 steel pipeline for the Seckerton Gathering Line will be installed within Lots 20 and 21, Concessions 8 and 9, in the former Township of Moore, in St. Clair Township, in Lambton County.

3. The proposed 50 metres of NPS 20 steel pipeline for the Seckerton Pool Line Station Tie-In will be installed within Lots 21, Concession 9, in the former Township of Moore, in St. Clair Township, in Lambton County.

4. The proposed 50 metres of NPS 16 steel pipeline for the Corunna Pool Line Station Tie-In will be installed within Lots 19 or 20, Concession 10 in the former Township of Moore, in St. Clair Township, in Lambton County, and passes through a laneway.

Design and Construction

5. The pipeline and facilities will be designed, constructed and operated in compliance with O. Reg. 210/01 *Oil and Gas Pipeline Systems* and Enbridge's design, construction and operating standards. The primary design standard adopted by O. Reg. 210/01 is CSA Z662-07 *Oil and Gas Pipeline Systems.*

Materials

6. All pipeline material will meet the requirements of the applicable CSA standards:
   - Z245.1-02, Steel Pipe
   - Z245.11-01, Steel Fittings
   - Z245.12-01, Steel Flanges
   - Z245.15-01, Steel Valves
   - Z245.20-02, External Fusion Bond Epoxy Coating
   - Z245.21-02, External Polyethylene Coating for Pipe

Corrosion Protection

7. External corrosion protection will be provided by a combination of external coating and cathodic protection. No special internal corrosion protection is required since the natural gas will be of transmission quality.

Design Criteria

8. Table 1 below outlines the design criteria for the NPS 20 steel pipeline for the Interconnect Pipeline, Seckerton Gathering Line and the Seckerton Pool Line Station Tie-In. A portion of the Interconnect Pipeline may cross a laneway, where the design criteria would differ slightly; this is also outlined in Table 1 below.

Table 1

DESIGN CRITERIA FOR NPS 20 STEEL PIPELINES

Description	Application CSA Z662-07 Table 4.2 Location Class 1 General	Application CSA Z662-07 Table 4.2 Location Class 1 Road Crossing
Combined Design & Location Factor	0.8	0.6
Nominal Pipe Diameter (mm)	508	508
Design Pressure (kPa)	11 730	11 730
Maximum Operating Pressure (kPa)	11 730	11 730
Operating Pressure Range (kPa)	2 240 – 11 030	2 240 – 11 030
Grade (MPa)	414	414
Minimum Wall Thickness (mm)	9.5	12.7
Fracture Category	II	II
Minimum Design Temperature (degC) Above Grade / Buried	M30 / M5	M30 / M5
Maximum Design Temperature (degC)	120	120
Hydrostatic Test Pressure (kPa)	14 660	14 660
Estimated Length (m)	3400	< 100

9. Table 2 below outlines the design criteria for the NPS 16 steel pipeline for the Corunna Pool Line Station Tie-In. A portion of this pipeline may cross a laneway, where the design criteria would differ slightly; this is also outlined in Table 2 below.

Table 2

DESIGN SPECIFICATIONS FOR NPS 16 STEEL PIPELINE

Description	Application CSA Z662-07 Table 4.2	Application CSA Z662-07 Table 4.2
	Location Class 1 General	Location Class 1 Road Crossing
Combined Design & Location Factor	0.8	0.6
Nominal Pipe Diameter (mm)	406.4	406.4
Design Pressure (kPa)	11 730	11 730
Maximum Operating Pressure (kPa)	11 730	11 730
Operating Pressure Range (kPa)	2 240 – 11 030	2 240 – 11 030
Grade (MPa)	≥ 359	448
Minimum Wall Thickness (mm)	9.5	9.5
Fracture Category	II	II
Minimum Design Temperature (degC) Above Grade / Buried	M30 / M5	M30 / M5
Maximum Design Temperature (degC)	120	120
Hydrostatic Test Pressure (kPa)	14 660	14 660
Estimated Length (m)	50	≤ 50

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Exhibit C
Tab 1
Schedule 2
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HYDROSTATIC TEST REQUIREMENTS

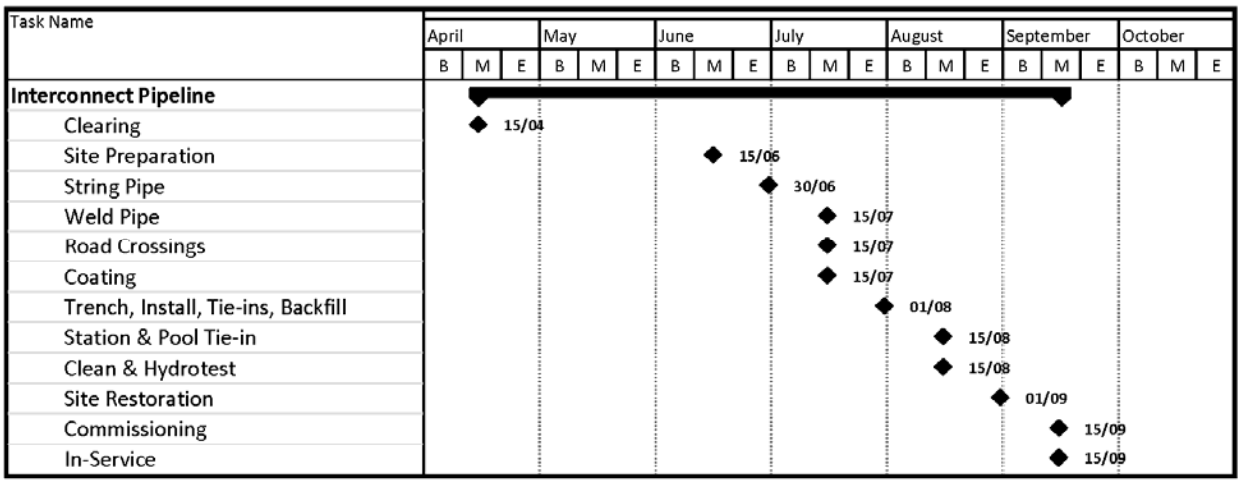
1. The pipelines will be hydrostatically pressure tested according to CSA Z662-07.

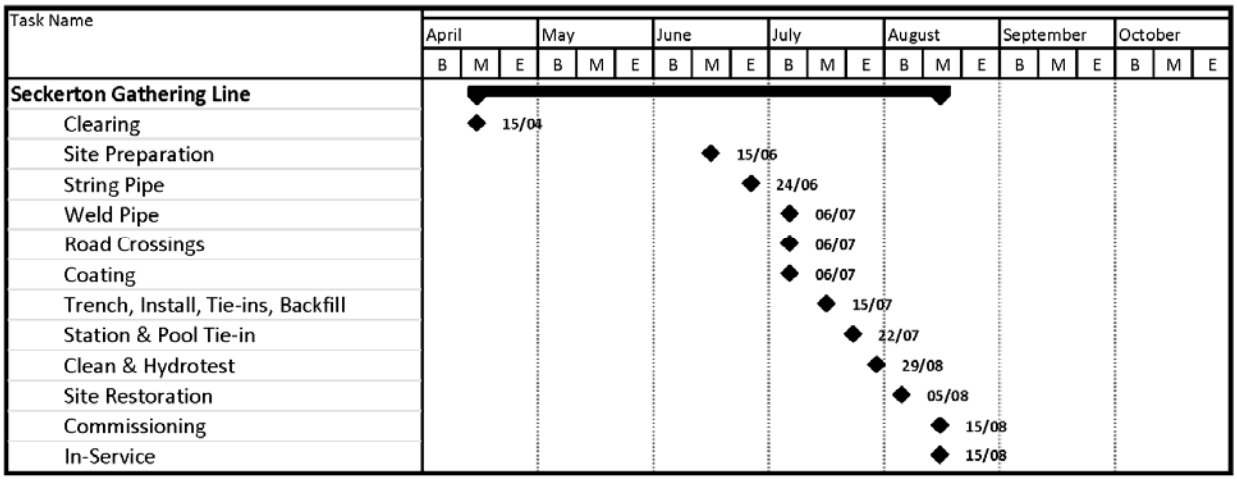
2. Enbridge is proposing to use municipal water for the pressure test, and if necessary will supplement this source with water from the Corunna Compressor Station's fire-pond, located at 3595 Tecumseh Road East, Mooretown, Ontario.

3. Enbridge intends to adhere to the requirements described in the November 2010 Dow Moore, Corunna and Seckerton Pipeline Project Environmental Assessment, Section 4.5 Hydrostatic Testing, prepared by Stantec found at Exhibit B, Tab 2, Schedule 2. Permits will be obtained as necessary to take and discharge water.

PROPOSED CONSTRUCTION SCHEDULE

1. The proposed construction milestones for 2011 are shown in the following Gantt Charts:





The Seckerton Station Meter Station Tie-In and the Corunna Meter Station Tie-In will be constructed within the construction schedule of the Interconnect Pipeline and Seckerton Gathering Line and will be completed by August 15, 2011.

2. The construction schedule (June to September 2011) is set up to allow Enbridge to carry on its regular storage operation activities and meet contractual obligations.

3. Enbridge has initiated discussion with Stantec and plans to engage the Ministry of Natural Resources ("MNR") to address the concerns as indicated in the MNR's December 10, 2010 note to Stantec, filed in the addendum to the Environmental Report, Exhibit B, Tab 2, Schedule 3. If mitigative or protective measures cannot be developed to allow construction per schedule above, the construction time-table will be adjusted. Enbridge will inform the Board should that happen.

4. Restoration monitoring will continue post construction, following the recommendations in the ER prepared by Stantec and will comply with the conditions of the OEB's Decision and Order for this proceeding.

D-LAND ISSUES

Filed: 2010-12-17
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Exhibit D
Tab 1
Schedule 1
Page 1 of 1

PERMITS REQUIRED

Authority	Purpose of Permit
St. Clair Region Conservation Authority 205 Mill Pond Crescent Strathroy, ON N7G 3P9	Fill, Construction, and Alteration to Waterways Permit
The Corporation of the Township of St. Clair 1155 Emily Street Mooretown, ON N0N 1MO	Permit to Cross Municipal Drain Permit to Cross Township Road Fire Permit Tree Clearing Permit
Ministry of Natural Resources 659 Exeter Road London, ON N6E 1L3	Construction Permit Under the Lakes and Rivers Improvement Act
Ministry of the Environment 1094 London Road Sarnia, ON N7S 1P1	Permit to Take Water
Ministry of Transportation 301 St. Paul Street, 2nd Floor Garden City Tower St. Catharines, ON L2R 7R4	Haul Routes Permit
Technical Standards and Safety Authority 3300 Bloor St. W., 14th Floor, Centre Tower Toronto, ON M8X 2X4	Permit

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Exhibit D
Tab 1
Schedule 2
Page 1 of 2

NEGOTIATIONS TO DATE

1. The proposed preferred route for the proposed Dow Moore, Corunna and Seckerton Pipeline Project are on lands owned by Enbridge or are on lands where Enbridge holds current and valid gas storage lease agreements and/or are within designated gas storage pools whereby Enbridge holds the right to install pipelines for gas storage operations as provided by OEB Order E.B.O. 5, December 2, 1963 and thus, easements or land acquisitions are not required.

2. All properties in the proposed Dow Moore, Corunna and Seckerton Pipeline Project are located in the former Township of Moore, in the Township of St. Clair, in the County of Lambton and the landowners and property locations for the preferred route are shown in table below.

3. As noted, new lease rights or acquisitions are not required. Enbridge has met and will continue to engage the affected landowners along the preferred route regarding the construction and operational matters related to the Project.

Table 1

PROPERTY OWNERS ON THE PREFERRED ROUTE

Location of Property (within the former Township of Moore)	Landowner
Lot 19, Concession 8 PIN 43295-0098 & PIN 43295-0099	Robert James McClemens and Mary Patrice McClemens 944 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0
Lot 19, Concession 8 PIN 43295-0071 & PIN 43295-0097 And Encumbrancer	912176 Ontario Limited, A subsidiary of Enbridge Gas Distribution Inc.
Lot 21, Concession 10 (Surface Rights), Lot 22, Concession 10 & Lot 22, Concession 9 PIN 43295-0107 & PIN 43295-0082	Nova Chemicals (Canada) Ltd. c/o Doug Mathany 201 North Front Street P.O. Box 3054 Sarnia, ON N8T 7V1
Lot 20, Concession 10 PIN 43295-0087	Robert Large and Gail Elizabeth Large 1366 Blackwell Road Sarnia, ON N7S 5M4
Lot 20, Concession 10 PIN 43295-0088/89	Joseph William Wellington, Margaret Ruth Wellington, and Richard James Wellington 1073 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0
Lot 19, Concession 8 PIN 43295-0071 & PIN 43295-0097	912176 Ontario Limited c/o Enbridge Gas Distribution Inc. 3595 Tecumseh Road Mooretown, ON N0N 1M0

Filed: 2010-12-17
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AFFIDAVIT OF ANN L. GRAY REGARDING SEARCH OF TITLE

I, ANN L. GRAY, of the City of Sarnia, MAKE OATH AND SAY AS FOLLOWS:

1. I am a Title Searcher in the County of Lambton. I have been retained by Enbridge Gas Distribution Inc. to search the title to the property in this Application and as such I have knowledge of the matters hereinafter deposed to.

2. I was informed by the Land Agent/Land Contracts Manager of Enbridge Gas Distribution Inc. of the properties through/upon which the proposed pipeline would be located. Accordingly, I conducted searches of title to these properties within the months of November and December, 2010.

3. As a result of my searches of title, I determined the owners and encumbrancers with land, or registered interests in land which would be affected by the construction of the proposed pipeline and to the best of my knowledge and belief all such owners and encumbrancers are set out in Exhibit "A" to this my affidavit.

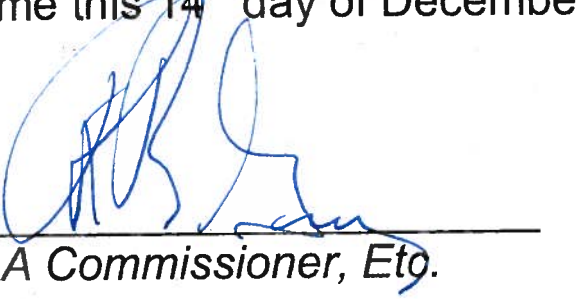
SWORN BEFORE ME at the City of Sarnia, in the County of Lambton and Province of Ontario.
This 14th day of December, 2010

)
)
)

ANN L. GRAY

A Commissioner, Etc.

This is Exhibit "A" to the Affidavit of Ann L. Gray, sworn before me this 14th day of December, 2010



A Commissioner, Etc.

LIST OF INTERESTED PARTIES

Party	Role
1031052 Ontario Limited c/o James R. Elliott 1918 LaSalle Road Sarnia, ON N7T 7H5	Landowner Lot 19, Concession 8 PIN 43298-0068
Blackburn Radio Inc. 1415 London Road Sarnia, ON N7S 1P6	Landowner Lot 22, Concession 9 PIN 43295-0101
James William DeGurse and Stephanie Phyllis DeGurse 1421 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lots 20 & 21, Concession 8 PIN 43298-0065
Matthew Philip Hergott 1685 Petrolia Line Corunna, ON N0N 1G0	Landowner Lot 19, Concession 10 PIN 43295-0092
Antonio Fracalanza and Carla Fracalanza 1366 Blackwell Road Sarnia, ON N7S 5M4	Landowner Lot 21, Concession 8 PIN 43298-0064
Bruce Floyd Knight and Kathleen Sarah Knight 1163 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 19, Concession 10 PIN 43295-0091
Robert Large and Gail Elizabeth Large 1025 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 20, Concession 10 PIN 43295-0087
Jeffrey Kent Larsen and Tracey Ann Larsen 3765 Ladysmith Road, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 22, Concession 8 PIN 43298-0063

Clifford Wayne Lennan 3263 Petrolia Line Petrolia, ON N0N 1R0	Landowner Lot 22, Concession 8 PIN 43298-0061
Lori Jeannette Maidment 1171 Rokeby Line Mooretown, ON N0N 1M0	Landowner Lot 19, Concession 8 PIN 43298-0070
Robert James MClemens and Mary Patrice McClemens 944 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 21, Concession 9 PIN 43295-0098 & PIN 43295-0099
Joseph William Wellington, Margaret Ruth Wellington and Richard James Wellington 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Landowner (Surface Rights) Lot 20, Concession 10 PIN 43295-0088
Henry Edwin Wellington, Joseph William Wellington, Margaret Ruth Wellington and Richard James Wellington 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Landowner (Mineral Rights) Lot 20, Concession 10 PIN 43295-0089
Ann McLaughlin and Thomas Edward McLaughlin 620 Secretariate Drive, Paddock Green Corunna, ON N0N 1G0	Landowner Lot 19, Concession 8 PIN 43298-0067
Thomas Joseph McLaughlin and Joyce Elaine McLaughlin 855 Petrolia Line Corunna, ON N0N 1G0	Landowner Lot 22, Concession 10 PIN 43295-0083

James Moore Jr. 1148 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 19, Concession 9 PIN 43295-0094
1375525 Ontario Limited, c/o Allan and Diane Murray 1067 Rokeby Line Mooretown, ON N0N 1M0	Landowner Lot 20, Concession 8 PIN 43298-0066
Nova Chemicals (Canada) Ltd. c/o Doug Mathany 201 North Front Street P.O. Box 3054 Sarnia, ON N8T 7V1	Landowner Lot 21, Concession 10 (Surface Rights), Lot 22, Concession 10 & Lot 22, Concession 9 PIN 43295-0107 & PIN 43295-0082 and Encumbrancer
Virginia Reutiman 305 East Rice Street P.O. Box 367 Wayzata, MN 55391	Landowner Lot 20, Concession 9 PIN 43295-0096
Linda Louise Valline 11719 S700E, Draper, Utah 84020	Landowner Lot 20, Concession 9 PIN 43295-0096
Garry Arthur Robbins and Mary Patricia Robbins 855 Rokeby Line, R.R. 1 Mooretown, ON N0N 1M0	Landowner Lot 22, Concession 8 PIN 43298-0062
Gary Scott Robinson and Rebecca Lynn Campbell 823 Rokeby Line, Mooretown, ON N0N 1M0	Landowner Lot 22, Concession 8 PIN 43298-0060

Kenneth W. Smith and Dorothy Smith 1191 Rokeby Line Mooretown, ON N0N 1M0	Life Interest in Lot 19, Concession 8 PIN 43298-0071
Harold Walter Taylor and Gail Dianne Taylor 904 Rokeby Line Mooretown, ON N0N 1M0	Landowner Lot 21, Concession 9 PIN 43295-0100
Joseph William Wellington, Margaret Ruth Wellington and Robert Scott Wellington 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Landowner (Mineral Rights) Lot 21, Concession 10 PIN 43295-0086
Pauline Mary Wellington 1020 Petrolia Line, R.R. 1 Corunna, ON N0N 1G0	Landowner Lot 21, Concession 10 PIN 43295-0085
Keith William Wilson, Charlotte Irene Wilson and Thomas William Wilson 894 Petrolia Line Corunna, ON N0N 1G0	Landowner Lot 22, Concession 10 PIN 43295-0084
912176 Ontario Limited c/o Enbridge Gas Distribution Inc. 3595 Tecumseh Road Mooretown, Ontario N0N 1M0	Landowner Lot 19, Concession 8 & Lots 20 & 21, Concession 9 PIN 43295-0097, PIN 43298-0071 & PIN 43298-0097 And Encumbrancer
Robert Young and Gertrude Young 790 Tudor Close Sarnia, ON N7V 2Z5	Landowner Lot 19, Concession 9 PIN 43295-0093

Union Gas Limited Attn: Lands Department 50 Keil Drive North, Chatham, Ontario N7M 5M1	Landowner Lot 19, Concession 9 PIN 43295-0095 And Encumbrancer
923726 Ontario Limited c/o Enbridge Gas Distribution Inc. 3595 Tecumseh Road Mooretown, Ontario N0N 1M0	Encumbrancer
The Corporation of the County of Lambton 789 Broadway Street, P.O.Box 3000, Wyoming, Ontario N0N 1T0	Landowner Roads
3305911 Canada Inc. c/o Fraser & Beatty (Attn Victor Y. Hum) P.O.Box 100, 1 First Canadian Place, 100 King Street West, Toronto, Ontario M5X 1B2	Encumbrancer
Helen Margaret Wellington c/o 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Life Interest in Lot 21, Concession 10 PIN 43295-0086 & PIN 43295-0107
Dome NGL Pipeline Ltd.	Encumbrancer
Interprovincial Pipe Line Inc. c/o Eastern Division, Box 128, Sarnia, Ontario N7T 7H8	Encumbrancer
The Bank of Nova Scotia 4184 Petrolia Line, Petrolia, Ontario N0N 1R0	Mortgagee PIN 43298-0065
Scotia Mortgage Corporation 10 Wright Blvd., Stratford, Ontario N5A 7X9	Mortgagee PIN 43298-0060

Bank of Montreal First Canadian Place, 11th Floor, Toronto, Ontario M5X 1A1	Mortgagee PIN 43295-0101
Royal Bank of Canada 180 Wellington Street West, Toronto, Ontario M5J 1J1	Mortgagee PIN 43298-0060 PIN 43295-0083 PIN 43298-0070
The Toronto-Dominion Bank 196 N. Christina Street, Sarnia, Ontario N7T 7H8	Mortgagee PIN 43295-0094
Lambton Financial Credit Union Limited 1295 London Road, Sarnia, Ontario N7S 5A1	Mortgagee PIN 43295-0092 PIN 43298-0063
The Toronto-Dominion Bank 4201 Petrolia Line, Petrolia, Ontario N0N 1R0	Mortgagee PIN 43298-0061
Bank of Montreal 1362 Lambton Mall Road Sarnia, Ontario N7S 5A1	Mortgagee PIN 43295-0091
Lambton Financial Credit Union Limited 2394 Jane Street, Brigden, Ontario N0N 1B0	Mortgagee PIN 43298-0066
Lambton Cartage & Warehousing Limited c/o 2 Ferry Dock Hill, Sarnia, Ontario N7T 7L8	Mortgagee PIN 43298-0064
Dancy Broadcasting Limited c/o Blackburn Radio Inc. 1415 London Road Sarnia, ON N7S 1P6	Encumbrancer

Patricia Newell 1143 Petrolia Line Corunna, Ontario N0N 1G0	Encumbrancer
Arthur Battle and Jeanette Battle, c/o 1073 Petrolia Line, R.R.1, Corunna, ON N0N 1G0	Life Interest in Lot 21, Concession 10 PIN 43295-0086 & PIN 43295-0107
The Corporation of the Township of St. Clair 1155 Emily Street, Mooretown, Ontario N0N 1M0	Landowner Roads And Encumbrancer
Citibank Canada c/o Gowling Lafleur Henderson Attn John M. Whyte, 123 Front Street, Toronto, Ontario M5J 2M3	Mortgagee PIN 43295-0082
Hydro One Networks Attn. Mr. Tony Lerullo 483 Bay Street, North Tower, 15th Floor Toronto, ON M5G 2P5	Encumbrancer

Filed: 2010-12-17
EB-2010-0302
Exhibit E
Tab 1
Schedule 1
Page 1 of 1

ABORIGINAL CONSULTATION

1. To minimize the potential for impacts to existing or asserted Aboriginal treaty rights within the study area, Stantec notified First Nations and related agencies. This process was consistent with the OEB proposed Aboriginal Consultation Policy proceeding, EB-2007-0617.

2. Indian and Northern Affairs Canada ("INAC") and the Ministry of Aboriginal Affairs were notified of the commencement of the Environmental Assessment on October 14, 2010. No response was received to date.

3. Stantec identified the following First Nations and related agencies which are located within 100 kilometers (km) of the study area as having a potential interest in the project. These groups were notified of the commencement of the Environmental Assessment on October 14, 2010:
   - Aamjiwnaang First Nation
   - Chippewas of Kettle and Stony Point
   - Walpole Island First Nation

   No response was received to date.

4. All written correspondence is provided in the ER found in Exhibit B, Tab 2, Schedule 2, specifically Appendix A1.

5. Enbridge will be providing the above mentioned First Nations with a copy of the Application, and will further contact them to discuss the project.

500 Consumers Road
North York, Ontario
M2J 1P8
PO Box 650
Scarborough ON M1K 5E3

Lesley Austin
Regulatory Coordinator
Regulatory Proceedings
phone: (416) 495-6505
fax: (416) 495-6072

VIA RESS, EMAIL AND COURIER

January 21, 2011

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

Dear Ms Walli:

Re: Enbridge Gas Distribution Inc. ("Enbridge")
Leave to Construct – Dow Moore, Corunna and Seckerton Pipeline Project
Board File No.: EB-2010-0302 – Updated Evidence

On December 17, 2010, Enbridge submit the Dow Moore, Corunna and Seckerton Pipeline Project ("Project") to the Ontario Energy Board (the "Board"). This Project is for a leave to construct four segments of pipe totaling approximately 3500 metres and related facilities. These facilities are part of a project to enable the expansion of Enbridge's Tecumseh storage.

As a result of correspondence with the Technical Standards & Safety Authority ("TSSA"), Enbridge is submitting an update to the Design Specification evidence. Exhibit C, Tab 1, Schedule 1, page 2 is enclosed for your reference.

This submission has been filed through the Board's RESS, with two copies being delivered to the Board by courier. Enbridge's Dow Moore, Corunna and Seckerton Pipeline Project Application is available on the Enbridge website at: www.enbridgegas.com/dmcsproject.

Sincerely,

Lesley Austin

cc: Scott Stoll, Aird & Berlis (via email)
Zora Crnojacki, Chairperson, OPCC (via email)
OPCC Member (via email)

Design and Construction

5. The pipeline and facilities will be designed, constructed and operated in compliance with O. Reg. 210/01 *Oil and Gas Pipeline Systems* and Enbridge's design, construction and operating standards. The primary design standard adopted by O. Reg. 210/01 is CSA Z662-07 *Oil and Gas Pipeline Systems.*

Materials

6. All pipeline material will meet the requirements of the applicable CSA standards:
   - Z245.1-02, Steel Pipe
   - Z245.11-01, Steel Fittings
   - Z245.12-01, Steel Flanges
   - Z245.15-01, Steel Valves
   - Z245.20-02, External Fusion Bond Epoxy Coating
   - Z245.21-02, External Polyethylene Coating for Pipe

Corrosion Protection

7. External corrosion protection will be provided by a combination of external coating and cathodic protection. No special internal corrosion protection is required since the natural gas will be of transmission quality.

Design Criteria

8. Table 1 below outlines the design criteria for the NPS 20 steel pipeline for the Interconnect Pipeline, Seckerton Gathering Line and the Seckerton Pool Line Station Tie-In. A portion of the Interconnect Pipeline may cross a laneway, where the design criteria would differ slightly; these specifications are included in Table 1 below. Also, the portion of the Interconnect Pipeline and the portion of the Seckerton Gathering Line which tie into the Seckerton Metering Station may utilize the design criteria for laneways identified in Table 1, below, if it is determined that in-line inspection is not practical. /u