

May 9, 2013

BY COURIER & RESS

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

Dear Ms. Walli:

**RE: Union Gas Limited (“Union”)  
Dawn Parkway NPS26 Replacement Exemption Request  
EB-2013-0191**

Union hereby requests an Order granting leave to construct approximately 100 metres of NPS26 natural gas pipeline pursuant to s. 90(1) of the Ontario Energy Board Act, 1998, S.O. 1998 c. 15 Sch. B (the “Act”). A package of supporting material is attached.

This pipeline is needed to replace a portion of the Dawn Parkway system which must be replaced for integrity issues.

Union further requests an exemption, pursuant to s. 95 of the Act, from any requirement to hold a hearing pursuant to the requirements of s. 90(1) of the Act.

Replacement of the existing pipeline would not require Ontario Energy Board (“OEB”) leave to construct approval, if the existing pipe was removed and a new pipeline was constructed in the existing easement. However, as the section of pipeline to be replaced is under the Canadian National Railway (“CNR”), Union is proposing to abandon the existing pipeline in place and obtain a new easement for the replacement pipeline. As new lands rights will be required for the project, the project meets the requirements of s. 90(1) of the Act, requiring leave to construct.

Commencement of construction of the proposed pipeline is scheduled for September 2013.

In Union’s view, there are a number of reasons why this case warrants an exemption including:

1. Unions pipeline integrity program has a demonstrated immediate need for the pipeline replacement;

2. The directly affected landowners have not identified any issues with the project. The landowners have signed the necessary permanent and temporary agreements needed to complete the project. The permit process with CNR has been started and CNR has provide Union with a letter of non-objection to the project;
3. The alternative to the proposed project would be to remove the existing pipeline and construct a new pipeline in the existing easement. This alternative is not practical as the pipeline is under the main CNR railway between London and Sarnia;
4. Union has completed an environmental screening for the replacement work. If the proposed mitigation measures are followed, there will be no long term significant environmental impacts as a result of this project;
5. In order to ensure that there is no disruption of services to customers, the pipeline must be completed by November 2013.

Union respectfully requests the OEB initiate the process to review this request as soon as possible.

If you require additional information, please contact Mark Murray, Manager, Regulatory Projects, Union Gas Limited at 519-436-4601.

Yours truly,

[original signed by]

Dan Jones  
Assistant General Counsel  
:mjp  
Encl.

cc: Neil McKay, Manager Facilities Applications  
Zora Crnojacki, Project Advisor

**DAWN PARKWAY NPS26 REPLACEMENT PROJECT****INDEX**

Project Summary.....	1
Background.....	2
Proposed Facilities .....	3
Project Costs and Economics.....	3
Design and Construction.....	3
Landowners.....	5
Environmental.....	6
First Nations and Métis .....	7

**Schedules**

Schedule 1	Location Map
Schedule 2	Detailed Project costs
Schedule 3	Design and Pipe Specifications
Schedule 4	General Construction Techniques
Schedule 5	Construction Schedule
Schedule 6	TSSA Abandonment Guidelines
Schedule 7	Form of Easement
Schedule 8	CN Letter of Non-Objection
Schedule 9	Running line
Schedule 10	Landowner listing
Schedule 11	Environmental Review
Schedule 12	Environmental Checklist
Schedule 13	Environmental Costs
Schedule 14	First Nations and Métis correspondence

**Project Summary**

1. Union Gas Limited ("Union"), pursuant to Section 90(1) of the Ontario Energy Board Act, requests approval from the Ontario Energy Board ("OEB") for leave to construct approximately 100 metres of NPS26 hydrocarbon (natural gas) pipeline ("Proposed Pipeline"). Union is proposing to replace approximately 100 metres of the Dawn Parkway 26 pipeline ("Pipeline") in the vicinity of Walkers Drive and McEvoy Road in the Municipality of Strathroy-Caradoc (the "Project"). The location of the Proposed Pipeline is shown on Schedule 1.
2. The affected section of the Pipeline was constructed in 1957 and has been inspected periodically as part of Union's Integrity Management Program. Results of scheduled inspections in March 2012 identified integrity issues in the vicinity of the Pipeline's crossing of the railway owned by Canadian National ("CN") located approximately 350 meters west of the intersection of Walkers Drive and McEvoy Road in the Municipality of Strathroy-Caradoc which could pose safety and security of supply concerns if not addressed.
3. Union is proposing to abandon approximately 100 metres the Pipeline in place. The Proposed Pipeline will be constructed adjacent to the Pipeline and will require new land rights. Union proposes to construct the Proposed Pipeline using a directional bore to go under the CNR main line.
4. The estimated costs of the project are \$1,520,000.00.
5. Union has discussed the Project with the directly affected landowners along the route of the Proposed Pipeline. The landowners have not identified any concerns with the Project and

1 have signed the necessary permanent and temporary easement agreements to complete the  
2 project.

3 6. Union has completed an environmental review for the Project. This review did not identify  
4 any long term significant environmental impacts as a result of the Project.

5 7. Union is proposing to construct the Proposed Pipeline commencing in September 2013.  
6 Union requests Ontario Energy Board approval by August 2013.

7 **Background**

8 8. Since 2002, Union has had an extensive pipeline maintenance and integrity management  
9 program in place that includes the regular monitoring of pipelines for corrosion, leaks or other  
10 potential damage to ensure its pipelines remain in safe operating condition.

11 9. As part of this program, Union regularly conducts inline inspections of its pipelines using  
12 tools to determine the condition of the pipelines. Based on the results of these assessments,  
13 Union takes appropriate mitigation action to address any integrity issues that are found.

14 10. The Pipeline was initially inspected using inline inspection tools in 1996 and subsequent  
15 inspections were completed in 2005 and 2012. Investigative digs were also completed on the  
16 Pipeline subsequent to the inline inspections, and those anomalies which required removal  
17 were removed from the Pipeline. The inspection completed in 2012 identified metal loss on a  
18 section of the Pipeline that Union is proposing to replace.

19 11. The section of the Pipeline with metal loss is under a railway crossing and therefore  
20 inaccessible for direct inspection. The most effective action to manage and ensure the long

term integrity of the Pipeline, while minimizing impacts to the environment, is to abandon the existing pipeline in place and construct the Proposed Pipeline.

12. If the replacement is delayed, the integrity concerns may become more serious.

#### **Proposed Facilities**

13. Union determined that upsizing the Pipeline was not required as this is a very short length of pipeline and that the Pipeline should be replaced size for size.

#### **Project Costs and Economics**

14. The estimated costs for the Project are \$1,520,000.00. A detailed breakdown of these costs can be found at Schedule 2.

15. A Discounted Cash Flow report has not been completed as the Project is underpinned by the relocation requirements and there are no new contracts associated with this replacement.

#### **Design and Construction**

16. The Proposed Pipeline will have a Maximum Operating Pressure (“MOP”) of 6160 kPa.

17. The design and pipe specifications are outlined in Schedule 3. All the design specifications are in accordance with the *Ontario Regulations 210/01* under the *Technical Standards and Safety Act 2000, Oil and Gas Pipeline Systems*. This is the regulation governing the installation of pipelines in the Province of Ontario.

18. In consideration for future potential development along the route, the Proposed Pipeline is designed to meet Class 3 location requirements. The actual current class location of the areas is Class 1.

19. To determine Class Location, CSA Z662-11 uses a classification system that takes into account land use and population density. The classifications are as follows:

- 1) Class 1 areas consist of 10 or fewer dwellings;
- 2) Class 2 areas consist of 11 to 45 dwellings, or a building occupied by 20 or more persons during normal use such as playgrounds, recreational areas, or other places of public assembly as well as industrial installations;
- 3) Class 3 areas consist of 46 or more dwellings.
- 4) Class 4 contains a prevalence of buildings intended for human occupancy with 4 or more stories above ground.

20. The Proposed Pipeline will have an outside diameter of 660 mm and a minimum wall thickness of 9.5 mm. The pipe will have specified minimum yield strength of 448 MPa.

21. The Proposed Pipeline will be hydrostatically tested in accordance with the Ontario Regulation requirements.

22. The minimum depth of cover will be in accordance with Clause 4.11 of the CSA Code Z662-11. The depth of cover of that portion of the Proposed Pipeline beneath the CNR main line is governed by Transport Canada and will be 1.2 metres in accordance with Transport Canada Document TC E-10.

23. The majority of the Proposed Pipeline will be constructed using trenchless methods. Schedule 4 describes the General Techniques and Methods of Construction that will be employed in the construction of the Proposed Pipeline. This Schedule details the following activities; clearing,

1 stringing of pipe, trenching, welding, backfilling and clean up. Union continuously updates  
2 and refines its construction procedures to minimize potential impacts to lands and has since  
3 seen many improvements as a result of better construction practices.

4 24. Schedule 5 indicates that construction will commence in September, 2013 and be completed  
5 by the end of December, 2013.

6 25. The portion of the Pipeline to be abandoned in place will be in compliance with TSSA  
7 guidelines. The TSSA abandonment guidelines can be found at Schedule 6.

8 **Landowners**

9 26. For the construction of the Proposed Pipeline, one new permanent easement will be required  
10 and has been obtained from the landowner using Union's form of easement attached as  
11 Schedule 7.

12 27. Union will require crossing permits or agreements from CN. CN has provided a letter  
13 addressed to Union indicating they have no objection to the Project. Copy of this letter is  
14 attached as Schedule 8.

15 28. Union will not require any fee simple purchases of land to complete the Project.

16 29. All permanent and temporary easements for construction of the Proposed Pipeline have been  
17 obtained.

18 30. Schedule 9 identifies the maps that show the running line and the land rights required for the  
19 Proposed Pipeline.

20 31. Schedule 10 identifies the permanent and temporary land use rights Union has obtained for the  
21 construction of the Proposed Pipeline.



32. At the conclusion of construction, Union will seek a Full and Final Release from the affected landowners. This Full and Final Release will include compensation for any damages caused or attributed to the pipeline construction.

33. Union has implemented a comprehensive program to provide landowners, tenants, and other interested persons with information regarding the Proposed Pipeline. Project information was distributed through correspondence and meetings with the landowners.

34. After construction, negotiations with landowners will continue, where necessary, to settle any damages that were not foreseen or compensated for, prior to construction.

#### **Environmental**

35. Union retained the services of Stantec Consulting Ltd. to review the route of the Proposed Pipeline, and identify the environmental features that could be impacted by Proposed Pipeline's construction. Stantec's Environmental Review ("ER") can be found at Schedule 11

36. Union has also completed an environmental screening for the project consistent with the requirements of E.B.O. 188. The results of this screening can be found at the Environmental Checklist as Schedule 12.

37. The results of the Environment Review indicates that if the mitigation measures identified in the environmental report are followed there will be no long term significant environmental impacts.

38. Union will implement a program dealing with environmental inspection. This program will ensure that the recommendation in the ER is followed. An inspector trained in environmental

1 issues will monitor construction activities and ensure that all activities comply with the  
2 mitigation measures found in the ER. Environmental field studies will start in May 2013.

3 39. The total estimated environmental mitigation costs associated with the construction of the  
4 proposed facilities are \$75,000.00. A breakdown of these costs can be found at Schedule 13.  
5 The environmental costs are included in the Projects costs.

6 **First Nations and Métis**

7 40. Union has a long standing practice of consulting with First Nations and Métis, and has  
8 programs in place whereby Union works with them to ensure they are aware of Union's  
9 projects and have the opportunity to participate in both the planning and construction phases  
10 of the Project.

11 41. Union has an extensive data base and knowledge of First Nations and Métis organizations in  
12 Ontario and consults with the Tribal organizations and the data bases of the Ministry of  
13 Natural Resources, Ministry of Aboriginal Affairs and Aboriginal Affairs and Northern  
14 Development Canada to ensure consultation is carried out with the most appropriate groups.

15 42. Union has signed a General Relationship Agreement with the Métis Nation of Ontario which  
16 describes Union's commitments to the Métis when planning and constructing pipeline  
17 projects.

18 43. Union sent letters in April and May 2013 to the following First Nations and Métis regarding  
19 the Project. Copies of these letters are attached as Schedule 14. Due to the size, scope and  
20 location of the Project, it is not expected that these organizations will have any concerns  
21 with the Project.

Title	First Name	Last Name	Agency	Address	City	Prov	Postal
Chief	Christopher	Plain	Aamjiwnaang First Nation	978 Tashmoo Ave	Sarnia	ON	N7T 7H5
Ms.	Sharilyn	Johnston	Aamjiwnaang First Nation	978 Tashmoo Ave	Sarnia	ON	N7T 7H5
Chief	Thomas	Bressette	Chippewas of Kettle and Stony Point	6247 Indian Lane, RR#2	Forest (Kettle & Stony Point FN	ON	N0N 1J0
Mr.	Mark	Bowler	Métis Nation of Ontario	500 Old St. Patrick Street, Unit 3	Ottawa	ON	K1N 9G4
Chief	Burton	Kewayosh	Walpole Island First Nation	117 Tahgahoning Road	Wallaceburg	ON	N8A 4K9
Mr.	Dean	Jacobs	Walpole Island First Nation	R.R.#3	Wallaceburg	ON	N8A 4K9
Chief	Louise	Hillier	Caldwell First Nation	14 Orange Street, P.O. Box 388	Leamington	ON	N8H 3W3
Chief	Joe	Miskokomon	Chippewas of the Thames	320 Chippewas Road, RR#1	Muncey	ON	N0L 1Y0
Ms.	Rolanda	Elijah	Chippewa of the Thames	70 Anishnaabeg Road	Muncey	ON	N0L 1Y0
Chief	Greg	Peters	Moravian of the Thames	14760 Schoolhouse Road, RR 3	Thamesville	ON	N0P 2K0
Chief	Patrick	Waddilove	Munsee-Delaware Nation	289 Jubilee Rd, RR 1	Muncey	ON	N0L 1Y0
Chief	Joel	Abram	Oneida Nation of the Thames	2212 Elm Ave.	Southwold	ON	N0L 2G0

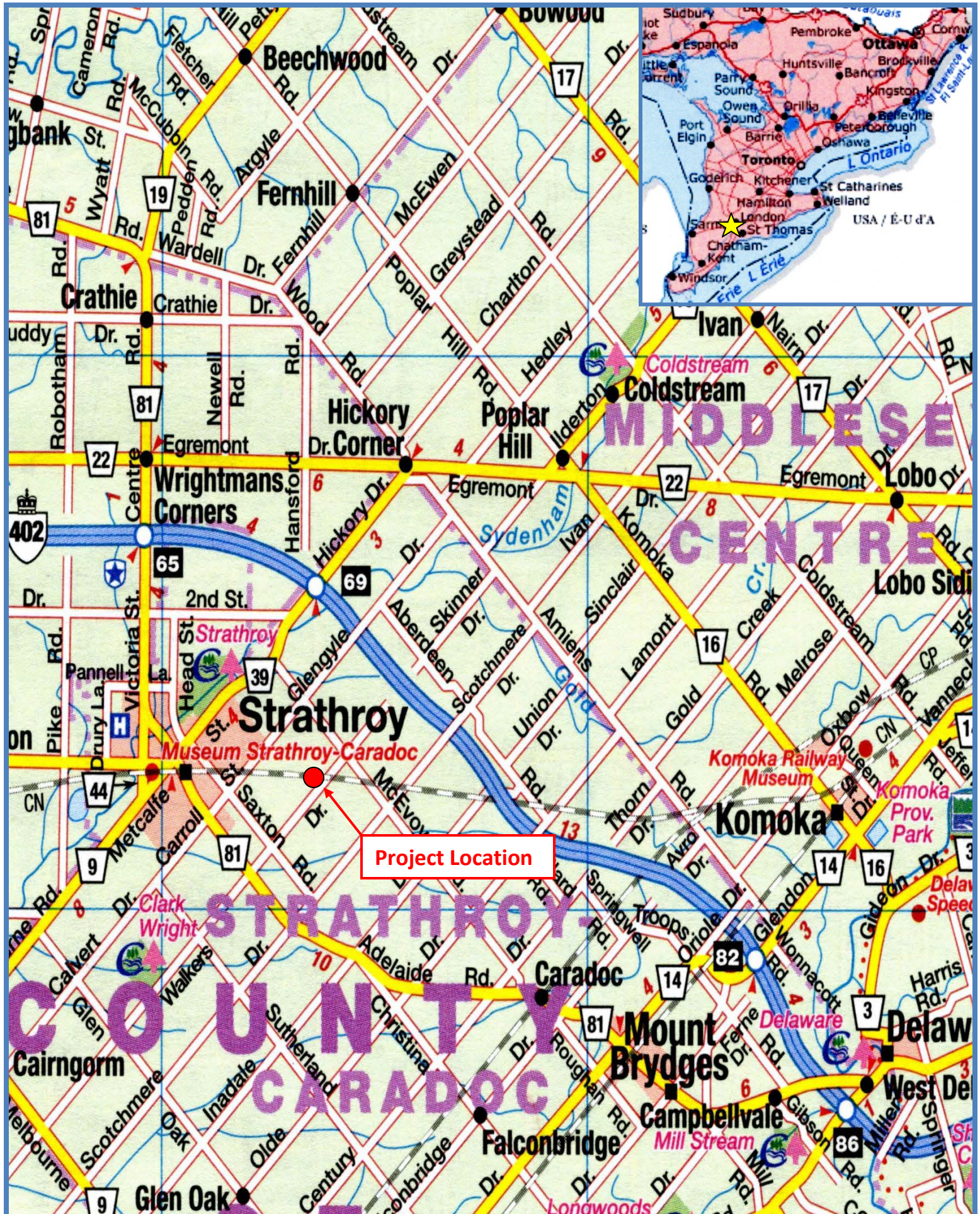
1

2        44. During construction, Union has inspectors in the field who are available to First Nation's

3                and Métis organization as a primary contact to discuss and review any issues that may arise

4                during construction.







## TOTAL ESTIMATED PIPELINE CAPITAL COSTS

### DAWN PARKWAY NPS26 REPLACEMENT PROJECT

#### Pipeline and Equipment

NPS 26 Steel Pipe, Coated 240 metres	\$210,000
Fittings & Miscellaneous Material	\$55,000

Sub-Total \$265,000

Stores Overhead – Fittings and Misc. Material \$5,000

**Total Pipeline and Equipment** \$270,000

#### Construction and Labour

Trenchless Install of 240 metres of NPS 26 Steel Pipe	\$700,000
Clearing, Stripping topsoil, Dewatering construction area	
Testing, Dewatering, Drying Pipe	
Grouting & Miscellaneous Contract Labour	

Company Labour, X-Ray, Construction Survey, Legal,  
Environmental Fees, Mill Inspection and Consultants \$290,000

Easements, Lands & Damages \$70,000

**Total Construction and Labour** \$1,060,000

**Total Pipeline and Equipment and Construction and Labour** \$1,330,000

**Contingencies** \$190,000

**Total Estimated Pipeline Capital Costs – 2013 Construction** \$1,520,000

Includes the Estimated Environmental Costs Identified in Schedule 13.

## **DAWN PARKWAY NPS26 REPLACEMENT PROJECT**

### **DESIGN AND PIPE SPECIFICATIONS**

#### **Design Specifications: NPS 26**

Class Location	-	Class 1
Design Class Location	-	Class 3
Design Factor	-	0.8
Location Factor (General)	-	0.900
Location Factor (Roads/Railways)	-	0.625
Maximum Design Pressure	-	6160 kPa
Maximum Operating Pressure	-	6160 kPa
Test Medium	-	Water
Test Pressure	-	8624 kPa
Valves/Fittings	-	PN 100
Minimum Depth of Cover	-	1.2 m

#### **Pipe Specifications:**

Size	-	NPS-26
Outside Diameter	-	660 mm
Wall Thickness	-	9.5 mm
Grade	-	448 MPa
Type	-	Double Submerged Arc Weld
Description	-	C.S.A. Standard Z245.1-07
Category	-	Cat. II, M5C
Coating	-	Fusion Bond Epoxy
% SMYS	-	47.8%

## GENERAL TECHNIQUES AND METHODS OF CONSTRUCTION

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1. Union Gas Limited (“Union”) will provide its own inspection staff to enforce Union’s construction specifications and *Ontario Regulation 210/01 under the Technical Standards and Safety Act 2000, Oil and Gas Pipeline Systems*.
2. Pipeline construction is divided into several crews that create a mobile assembly line. Each crew performs a different function, with a finished product left behind when the last crew has completed its work.
3. Union’s contract specifications require the contractor to erect safety barricades, fences, signs or flashers, or to use flag persons as may be appropriate, around any excavation across or along a road.
4. It is Union’s policy to restore the areas affected by the construction of the pipeline to “as close to original condition” as possible. As a guide to show the “original condition” of the area, photos and/or a video will be taken before any work commences. When the clean up is completed, the approval of the landowner or appropriate government authority is obtained.
5. Construction of the pipeline includes the following activities:

### **Locating Running Line**

6. Union establishes the location where the pipeline is to be installed (“the running line”). For pipelines within road allowances, the adjacent property lines are identified and the running line is set at a specified distance from the property line. For pipelines located on private easement, the easement is surveyed and the running line is set at the specified distance from the edge of the easement. The distance from the start of the pipeline (or other suitable point) is marked on the pipeline stakes and the drawings.

### **Clearing and Grading**

7. The right-of-way is prepared for the construction of the pipeline. When required, bushes, trees and crops are removed and the ground leveled. When required, the topsoil is stripped and stored, and/or sod is lifted.

**Removing Existing Pipeline**

8. The existing trench is excavated exposing the existing pipeline. The spoil material is placed onto the easement, separate from the topsoil. The existing pipeline is removed from the trench, cut into sections and trucked off site. The trench is then backfilled.

**Abandoning Existing Pipeline**

9. The existing pipe within the railway right of way can be abandoned in place. The abandoned sections are capped and filled with grout, a low density concrete.

**Stringing**

10. The joints of pipe are laid end-to-end on supports that keep the pipe off the ground to prevent damage to the pipe coating.

**Welding**

11. The pipe is welded/fused into manageable lengths. The welds in steel pipe are radiographically inspected, if required, and the welds are coated.

**Burying**

12. Pipe may be buried using either the trench method or the trenchless method. All utilities that will be crossed or paralleled by the pipeline are located by the appropriate utility prior to installing the pipeline. Prior to trenching, all such utilities will be hand-located or hydro vacuumed.

**Trench Method:** Trenching is done by using a trenching machine or hoe excavator depending upon the ground conditions. Provisions are made to allow residents access to their property, as required. All drainage tiles that are cut during the trench excavation are flagged to signify that a repair is required. All tiles are measured and recorded as to size, depth, type and quality. This information is kept on file with Union. If a repair is necessary in the future, Union will have an accurate method of locating the tile. Next, the pipe is lowered into the trench. For steel pipe, the pipe coating is tested using a high voltage electrical tester as the pipe is lowered into the trench. All defects in the coating are repaired before the pipe is lowered in. Next, if the soil that was excavated from the trench is suitable for backfill, it is backfilled. If the soil is not suitable for



backfill (such as rock), it is hauled away and the trench is backfilled with suitable material such as sand. After the trench is backfilled, drainage tile is repaired.

**Rock Excavation:** Rock in solid beds or masses will be removed by “Hoe Ram”, where practical. Where rock that is too hard to “Hoe Ram” is encountered, blasting will be permitted in accordance to Union’s construction procedures and the *Canadian Explosives Act*. The contractor shall obtain all necessary permits and shall comply with all legal requirements in connection with the use, storage and transportation of explosives.

**Trenchless Method:** Trenchless methods are alternate methods used to install pipelines under railways, roads, sidewalks, trees and environmentally sensitive areas. The trenchless method proposed the NPS 26 pipeline is auger boring. This method involves establishing two excavations, one on each side of the obstacle. Between the two excavations, an open-ended pipe will be pushed into the soil beneath the railway using hydraulic jacks. The spoil will be removed from the interior of the pipe by an auger and the soil removed from site.

### **Tie-Ins**

13. The sections of pipelines that have been buried using either the trench or trenchless method are joined together (tied-in).

### **Cleaning and Testing**

14. To complete the construction, the pipeline is cleaned, tested in accordance with Union’s specifications using water.

### **Restoration**

15. The final activity is the restoration. The work area is leveled, the sod is replaced in lawn areas and other grassed areas are re-seeded. Where required, concrete, asphalt and gravel are replaced to return the areas to as close to the original conditions as possible.

# Dawn Parkway NPS26 Replacement Project - Construction Schedule

ACTIVITY	August				September					October				November				December				
	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29
Field Survey Work																						
Tree Clearing																						
Access and Site Prep																						
Stringing																						
Welding																						
Crossing Preparation																						
Crossing Installation																						
Pressure Testing																						
Final Tie-ins																						
Purge and Pressurize																						
Clean Up & Abandon in place																						
In Service (Dec 1, 2013)																						
Spring Clean up (April 2014)																						



## **PIPELINE ABANDONMENT CHECKLIST**

### **PLANNING**

1. Has subsidence been considered for pipelines having a diameter greater than 323.9 mm (12 inches)?
2. Has the pipeline company notified the landowners and proper authorities (municipalities, MOE, MTO, MNR, etc.) of the abandonment?
3. Have abandonment procedures for crossings been agreed upon by utilities (road, railway, pipelines, etc.) and authorities responsible for rivers and streams crossed by the pipeline?
4. Has consideration been given to the effect of drainage in the area surrounding the abandoned pipeline, which may act as a conduit for ground water after the pipe is perforated by corrosion?
5. Has consideration been given to the removal of all the aboveground facilities?
6. Has consideration been given to any hazards posed to people, equipment, wildlife or livestock by any apparatus left in place above or underground?

### **IMPLEMENTATION**

1. Has the abandoned pipeline been physically isolated from the live pipeline?
2. Has the pipeline been drained of all fluids and adequately cleaned to prevent ground water contamination from hydrocarbon residue on the pipe wall after the pipe is perforated by corrosion?
3. Have all aboveground facilities been removed and has consideration been given to removing underground facilities such as anode beds and tanks?

### **LIABILITY/RISK MANAGEMENT**

1. Does the pipeline company have a contingency plan to remedy any contamination caused by the abandoned pipeline?
2. Has consideration been given to conducting post-abandonment surveillance programs?
3. Has consideration been given to maintaining signage after the pipeline is abandoned?
4. Has consideration been given to providing a locate service after the pipeline is abandoned?



For Internal Use Only
Lands File No.:
Cheque No.:
Project:
Acct No.:

PIPELINE EASEMENT

(the "Easement")

Between

(herein called the "Transferor")

and

**UNION GAS LIMITED**

(herein called the "Transferee")

This Easement is an easement in Gross

WHEREAS the Transferor is the owner in fee simple of those lands and premises more particularly described as:  
PIN:            Insert Legal            (hereinafter called the "Transferor's Lands").

The Transferor does hereby GRANT, CONVEY, TRANSFER AND CONFIRM unto the Transferee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands of the Transferee's lands the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Transferor's Lands more particularly described as being PIN:            Insert Legal            Being Part of the PIN (hereinafter referred to as the "Lands") to survey, lay, construct, maintain, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use and/or operate one Pipe line for the transmission of pipeline quality natural gas as defined in The Ontario Energy Board Act S.O. 1998 (hereinafter referred to as the "Pipeline") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Transferee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the Lands for its servants, agents, employees, those engaged in its business, contractors and subcontractors on foot and/or with vehicles, supplies, machinery and equipment for all purposes necessary or incidental to the exercise and enjoyment of the rights, liberty, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:

1. In consideration of the sum of            DOLLARS (\$) of lawful money of Canada (hereinafter called the "Consideration"), which sum is payment in full for the rights and interest hereby granted and for the rights and interest, if any, acquired by the Transferee by expropriation, including in either or both cases payment in full for all such matters as injurious affection to remaining lands and the effect, if any, of registration on title of this document and where applicable, of the expropriation documents, subject to Clause 12 hereof to be paid by the Transferee to the Transferor within 90 days from the date of these presents or prior to the exercise by the Transferee of any of its rights hereunder other than the right to survey (whichever may be the earlier date), the rights, privileges and easement hereby granted shall continue in perpetuity or until the Transferee, with the express written consent of the Transferor, shall execute and deliver a surrender thereof . Prior to such surrender Transferee shall remove all debris as may have resulted from the Transferee's use of the Lands from the Lands and in all respects restore the Lands to it's previous productivity and fertility so far as is reasonably possible , save and except for items in respect of which compensation is due under Clause 2. hereof. Transferor and Transferee hereby agree that nothing herein shall oblige Transferee to remove the Pipeline from the Lands as part of Transferee's obligation to restore the Lands.
2. The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any damages to the Lands resulting from the exercise of any of the rights herein granted, and if the compensation is not agreed upon by the Transferee and the Transferor, it shall be determined by arbitration in the manner prescribed by the Expropriations Act, R.S.O. 1990, Chapter E-26 or any Act passed in amendment thereof or substitution therefore. Any gates, fences and tile drains curbs, gutters, asphalt paving, lockstone, patio tiles interfered with by the Transferee shall be restored by the Transferee at its expense as closely as reasonably possible to the condition and function in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice and applicable government regulations.
3. The Pipeline (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 9 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the Lands nor ordinary cultivation of the Lands nor

any tile drainage system existing in the Lands at the time of installation of the Pipeline nor any planned tile drainage system to be laid in the Lands in accordance with standard drainage practice, if the Transferee is given at least thirty (30) days notice of such planned system prior to the installation of the pipeline; provided that the Transferee may leave the Pipeline exposed in crossing a ditch, stream, gorge or similar object where approval has been obtained from the Ontario Energy Board or other Provincial Board or authority having jurisdiction in the premises. The Transferee agrees to make reasonable efforts to accommodate the planning and installation of future tile drainage systems following installation of the pipeline so as not to obstruct or interfere with such tile installation.

4. As soon as reasonably possible after the construction of the Pipeline, the Transferee shall level the Lands and unless otherwise agreed to by the Transferor, shall remove all debris as may have resulted from the Transferee's use of the Lands therefrom and in all respects restore the Lands to its previous productivity and fertility so far as is reasonably possible, save and except for items in respect of which compensation is due under Clause 2 hereof.

5. The Transferee shall indemnify the Transferor for any and all liabilities, damages, costs, claims, suits and actions which are directly attributable to the exercise of the rights hereby granted, except to the extent of those resulting from the gross negligence or wilful misconduct of the Transferor.

6. In the event that the Transferee fails to comply with any of the requirements set out in Clause 2, 3, or 4 hereof within a reasonable time of the receipt of notice in writing from the Transferor setting forth the failure complained of, the Transferee shall compensate the Transferor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure and the reasonable costs if any, incurred in the recovery of those damages.

7. Except in case of emergency, the Transferee shall not enter upon any of the Transferor's Lands, other than the Lands, without the consent of the Transferor. In case of emergency the right of entry upon the Transferor's Lands for ingress and egress to and from the Lands is hereby granted. The determination of what circumstances constitute an emergency, for purposes of this paragraph is within the absolute discretion of the Transferee, but is a situation in which the Transferee has a need to access the pipeline in the public interest without notice to the Transferor, subject to the provisions of paragraph 2 herein. The Transferee will, within 72 hours of entry upon such lands, advise the Transferor of the said emergency circumstances and thereafter provide a written report to Transferor with respect to the resolution of the emergency situation. The Transferee shall restore the lands of the Transferor at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Transferee and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.

8. The Transferor shall have the right to fully use and enjoy the Lands except for planting trees over the lesser of the Lands or a six (6) metre strip centered over the Pipeline, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that without the prior written consent of the Transferee, the Transferor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the Lands any pit, well, foundation, pavement, building, mobile homes or other structure or installation. Notwithstanding the foregoing the Transferee upon request shall consent to the Transferor erecting or repairing fences, hedges, pavement, lockstone constructing or repairing tile drains and domestic sewer pipes, water pipes, and utility pipes and constructing or repairing lanes, roads, driveways, pathways, and walks across, on and in the Lands or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Transferor shall (a) give the Transferee at least (30) clear days notice in writing describing the work desired so as to enable the Transferee to evaluate and comment on the work proposed and to have a representative inspect the site and/or be present at any time or times during the performance of the work, (b) shall follow the instructions of such representative as to the performance of such work without damage to the Pipeline, (c) shall exercise a high degree of care in carrying out any such work and, (d) shall perform any such work in such a manner as not to endanger or damage the Pipeline as may be required by the Transferee.

9. The rights, privileges and easement herein granted shall include the right to install, keep, use, operate, service, maintain, repair, remove and/or replace in, on and above the Lands any valves and/or take-offs subject to additional agreements and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Transferee shall pay to the Transferor (or the person or persons entitled thereto) such additional compensation as may be agreed upon and in default of agreement as may be settled by arbitration under the provisions of The Ontario Energy Board Act, S.O. 1998, or any Act passed in amendment thereof or substitution therefore. The Transferee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the Lands.

10. Notwithstanding any rule of law or equity and even though the Pipeline and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Transferee.

11. Neither this Agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Transferee's rights to acquire the Lands or any other portion or portions of the Transferor's lands under the provisions of The Ontario Energy Board Act, S.O. 1998, or any other laws, which rights the Transferee may exercise at its discretion in the event of the Transferor being unable or unwilling for any reason to perform this Agreement or give to the Transferee a clear and unencumbered title to the easement herein granted.

12. The Transferor covenants that he has the right to convey this easement notwithstanding any act on his part, that he will execute such further assurances of this easement as may be requisite and which the Transferee may at its expense prepare and that the Transferee, performing and observing the covenants and conditions on its part

to be performed, shall have quiet possession and enjoyment of the rights, privileges and easement hereby granted. If it shall appear that at the date hereof the Transferor is not the sole owner of the Lands, this Indenture shall nevertheless bind the Transferor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all moneys payable hereunder shall be paid to the Transferor only in the proportion that his interest in the Lands bears to the entire interest therein.

13. In the event that the Transferee fails to pay the consideration as hereinbefore provided, the Transferor shall have the right to declare this easement cancelled after the expiration of 15 days from personal service upon the Secretary, Assistant Secretary or Manager, Lands Department of the Transferee at its Executive Head Office in Chatham, Ontario, (or at such other point in Ontario as the Transferee may from time to time specify by notice in writing to the Transferor) of notice in writing of such default, unless during such 15 day period the Transferee shall pay the said consideration; upon failing to pay as aforesaid, the Transferee shall forthwith after the expiration of 15 days from the service of such notice execute and deliver to the Transferor at the expense of the Transferee, a valid and registerable release and discharge of this easement.

14. All payments under these presents may be made either in cash or by cheque of the Transferee and may be made to the Transferor (or person or persons entitled thereto) either personally or by mail. All notices and mail sent pursuant to these presents shall be addressed to the Transferor at \_\_\_\_\_ and to the Transferee at Union Gas Limited, P.O.Box 2001, 50 Keil Drive North, Chatham, Ontario N7M 5M1. Attention: Manager, Lands or to such other address in either case as the Transferor or the Transferee respectively may from time to time appoint in writing.

15. The rights, privileges and easement hereby granted are and shall be of the same force and effect as a covenant running with the land and this Indenture, including all the covenants and conditions herein contained, shall extend to, be binding upon and enure to the benefit of the heirs, executors, administrators, successors and assigns of the Parties hereto respectively; and, wherever the singular or masculine is used it shall, where necessary, be construed as if the plural, or feminine or neuter had been used, as the case may be.

16. The Transferor hereby acknowledges that this transfer will be registered electronically and the Transferor hereby authorizes the Transferee to complete the registration of this transfer.

DATED this                      day of      January                      2010

\_\_\_\_\_  
**Name & Title:**  
  
I have authority to bind the corporation

\_\_\_\_\_  
**Name & Title:**  
  
I have authority to bind the corporation  
  
Address:

**UNION GAS LIMITED**

\_\_\_\_\_  
**Name:** [REDACTED]  
**Senior Lands Agent**  
  
I have authority to bind the Corporation

Additional Information: (if applicable)  
  
Solicitor:  
  
  
Telephone:

Municipality of Chatham-Kent

Province of Ontario

DECLARATION REQUIRED UNDER  
SECTION 50 OF THE PLANNING  
ACT, R.S.O. 1990, as amended

I, [REDACTED] of the City of Municipality of Chatham-Kent , in the Province of Ontario.

DO SOLEMNLY DECLARE THAT

1. I am, Senior Lands Agent [REDACTED] Lands Department of Union Gas Limited, the Transferee in the attached Grant of Easement and as such have knowledge of the matters herein deposed to.
2. The use of or right in the land described in the said Grant of Easement is being acquired by Union Gas Limited for the purpose of a hydrocarbon transmission line within the meaning of part VI of the Ontario Energy Board Act , 1998.

AND I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath, and by virtue of The Canada Evidence Act.

DECLARED before me at the  
Municipality of Chatham-Kent,  
in the Province of Ontario

this [REDACTED] day of January ,2010

A Commissioner, etc.

**System Engineering  
Engineering Services**

4 Welding Way  
off Administration Road  
P.O. Box 1000  
Concord, ON, L4K 1B9  
T: 905.669.3184  
F: 905.760.3406



March 28th, 2013

Attn: Joel O'Connor

After reviewing your proposed ideas for crossing on Walkers Line, at mile 17.20 on the Strathroy Subdivision, CN has no objections to the methodology proposed from Union Gas. CN will be awaiting the final detailed engineering drawings for final review and approval. Once you have these documents please forward them to my attention. (4 Welding Way, off 1 Administration Road, Concord, Ontario, L4K 1B9)

Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Sincerely,

A handwritten signature in black ink that reads 'Derek Basso'.

Derek Basso  
Engineering Technologist  
Derek.Basso@cn.ca



TOWNSHIP OF  
(GEOGRAPHICAL

LOT 16

STRATHROY - CARADOC  
TOWNSHIP OF CARADOC)  
CONCESSION 9

EXISTING NPS 26 TRAFALGAR PIPELINE  
EXISTING NPS 34 TRAFALGAR PIPELINE  
EXISTING NPS 42 TRAFALGAR PIPELINE  
EXISTING NPS 48 TRAFALGAR PIPELINE

18.288 WIDE EXISTING EASEMENT  
22.860 WIDE EXISTING EASEMENT

28.000m WIDE EXISTING EASEMENT

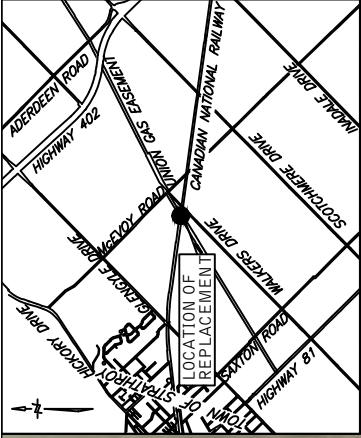
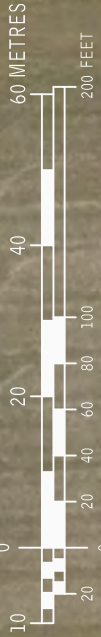
REPLACE 91.0m OF EXISTING  
NPS 26 TRAFALGAR LINE

CANADIAN NATIONAL RAILWAY

WALKERS DRIVE

LOT 16

CONCESSION 8



REVISIONS

NO.	DATE	BY	APP'D	REMARKS
01	13/04/22	KWG		RELOCATE REPLACEMENT LINE TO SOUTH SIDE OF NPS 26



**uniongas**  
A Spectra Energy Company

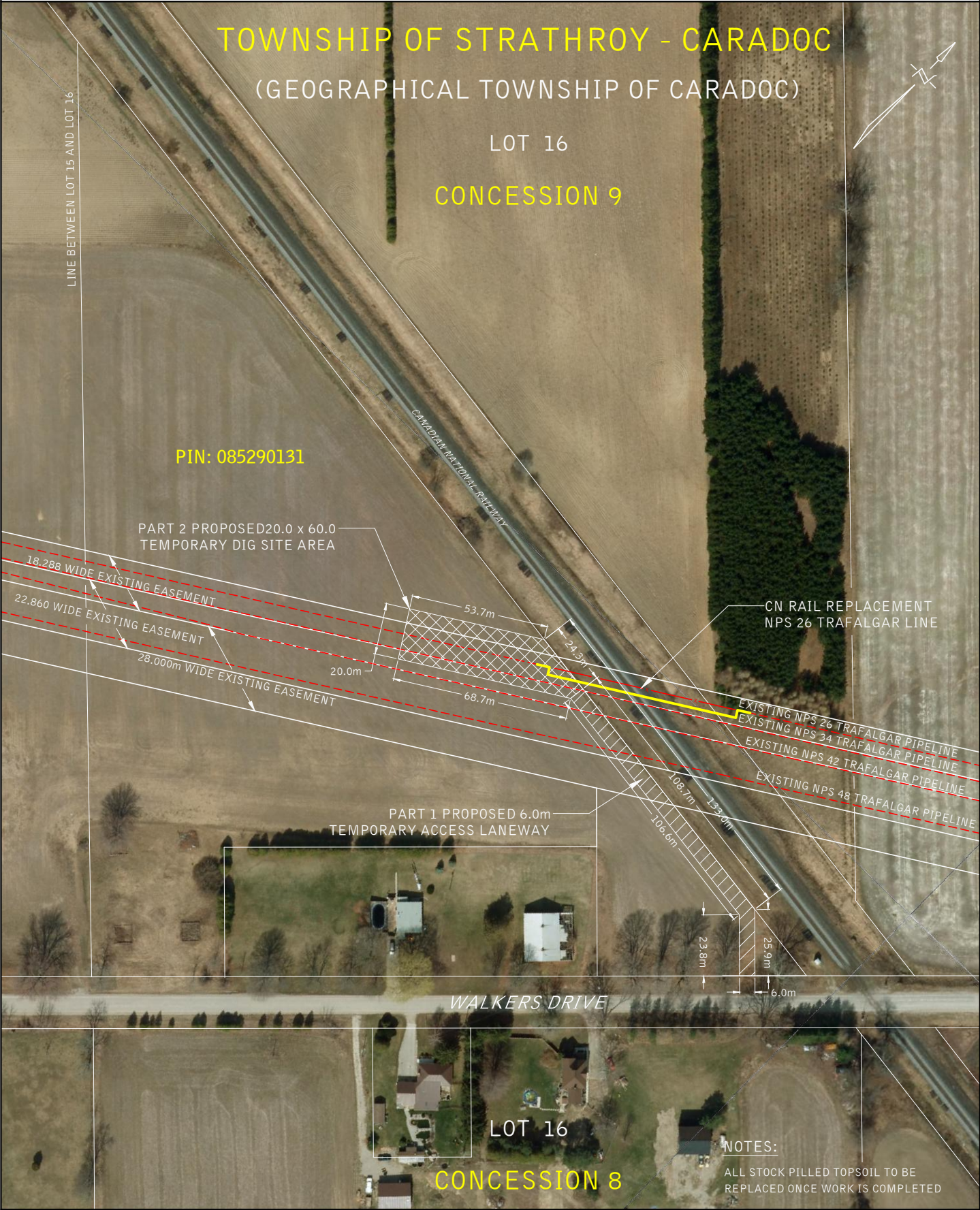
RELACEMENT LOCATION OF EXISTING  
NPS 26 TRAFALGAR LINE  
LOT 16, CONCESSION 9, TWP OF STRATHROY - CARADOC

DRAWN BY	K. W. GUERIN	DATE	2013/03/21	SCALE	1:1000	PLOT SPEC.	1:1
CHECKED BY		DATE		AC/DRAW CODE	N029-01		
APPROVED BY		DATE		JOB NO.			
SIZE	B	DRAWER	N/A	SHEET	1 of 1	DRAWING NO.	N029

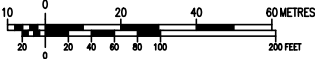


TRAFALGAR NPS 26 REPLACEMENT

Property Sketch  
Showing Approximate Location of  
Existing Permanent Pipeline Easement and Proposed Temporary Land Use Rights  
within  
LOT 16, CONCESSION 9,  
TOWNSHIP OF STRATHROY - CARADOC  
(GEOGRAPHIC TOWNSHIP OF CARADOC)



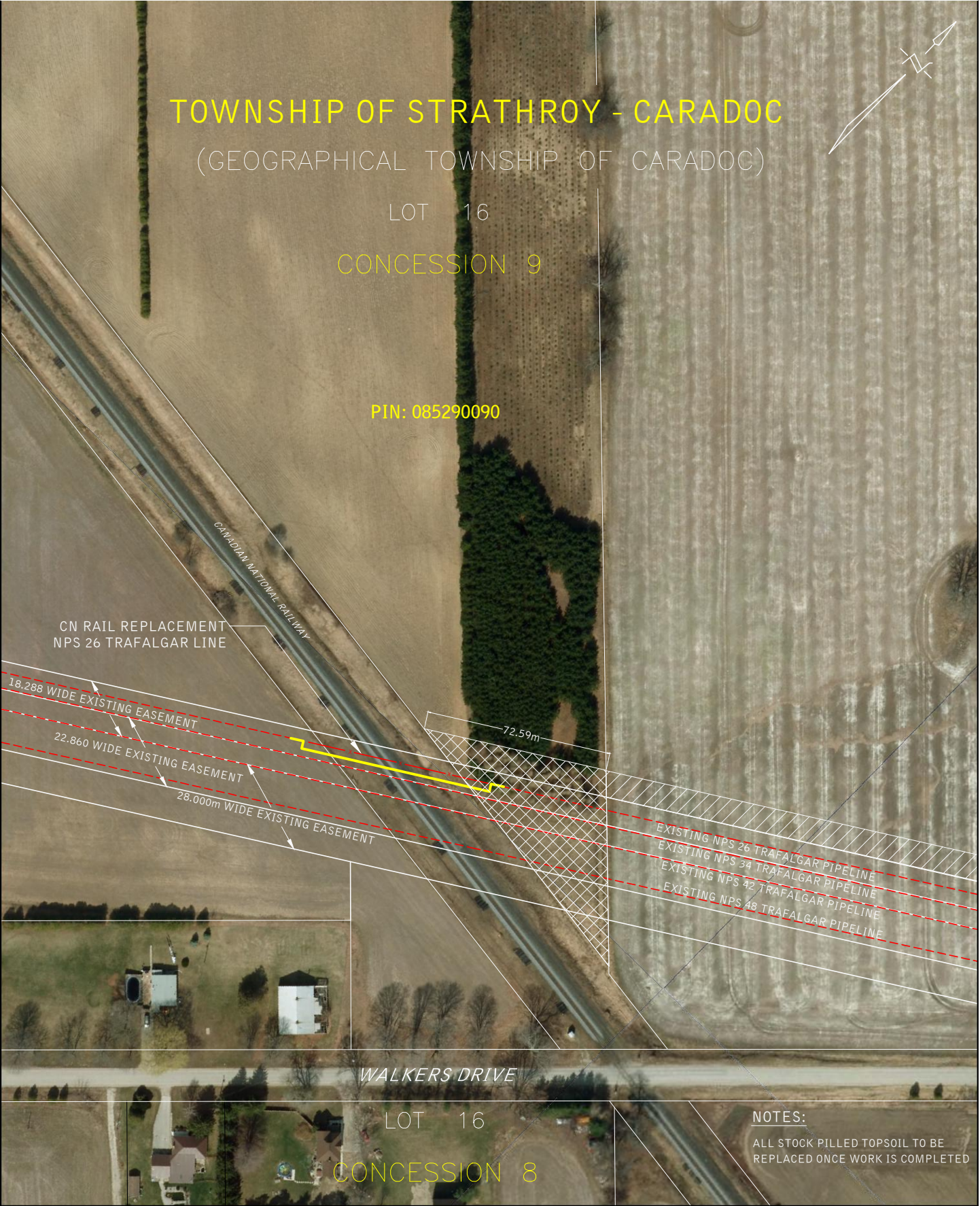
OWNER:



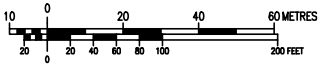
PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
1 (XXXX)	6.0m	IRREGULAR	0.080	0.198					
2 (XXXX)	20.0m	IRREGULAR	0.130	0.321					
PIN: 085290131			SCALE: 1:2000		*ALL DISTANCES ARE APPROXIMATE.			DATE: APR/25/2013	



Property Sketch  
Showing Approximate Location of  
Existing Permanent Pipeline Easement and Proposed Temporary Land Use Rights  
within  
LOT 16, CONCESSION 9,  
TOWNSHIP OF STRATHROY - CARADOC  
(GEOGRAPHIC TOWNSHIP OF CARADOC)



OWNER:



PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
1 (TEMP)	72.59m	IRREGULAR	0.27	0.67					

PIN: 085290090

SCALE: 1:2000

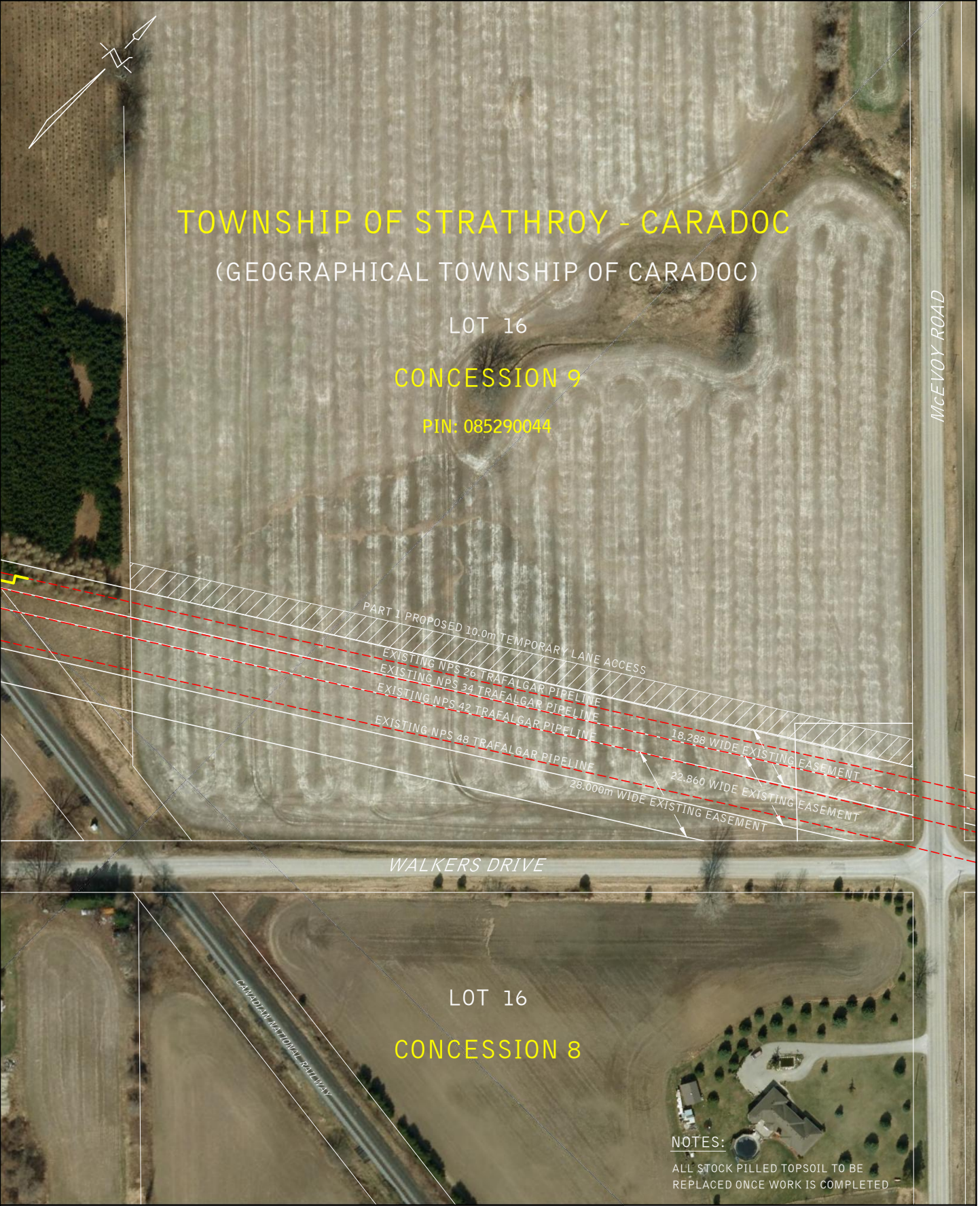
\*ALL DISTANCES ARE APPROXIMATE.

DATE: APR/25/2013

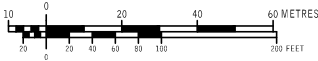


TRAFALGAR NPS 26 REPLACEMENT

Property Sketch  
Showing Approximate Location of  
Existing Permanent Pipeline Easement and Proposed Temporary Land Use Rights  
within  
LOT 16, CONCESSION 9,  
TOWNSHIP OF STRATHROY - CARADOC  
(GEOGRAPHIC TOWNSHIP OF CARADOC)



OWNER:



PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
1 (TEMP)	10.0m	312.7	0.31	0.77					
PIN: 08529044			SCALE: 1:2000		*ALL DISTANCES ARE APPROXIMATE.			DATE: APR/25/2013	

DAWN PARKWAY NPS26 REPLACEMENT PROJECT  
LANDOWNER LINE LIST

File #	PIN	NAME & ADDRESS	PROPERTY DESCRIPTION	PERMANENT EASEMENT Dimensions (Metres) Area Length Width (Hectares)	TEMPORARY EASEMENT Dimensions (Metres) Area Length Width (Hectares)	MORTGAGE, LIEN/LEASE &/OR ENCUMBRANCES
1	08529-0090		N 1/2 LOT 16, CONCESSION 9 SAVE AND EXCEPT PART 1, PLAN 33R-11659 AND PART SE 1/2 LOT 16, CONCESSION 9, PART 1, PLAN 34R-987 S/T CA30601, CA30637, MW36411 AND MW106840; S/T EASE OVER PARTS 1 & 2, 33R-16654 AS IN ER470177; TOWNSHIP OF STRATHROY-CARADOC/CARADOC	Length: 62.72m (Top) 44.74m (Bottom) Width: 18.288m  0.138 ha 0.34 ac	0.27 ha 0.67 ac	(a) Union Gas Limited 50 Keil Drive North Chatham, ON N7M 5M1  (b) St. Willibrord Community Credit Union Limited 167 Central Ave London, Ontario, N6A 1M6
2	08529-0131		PART OF LOT 15 & PART OF THE SE 1/2 LOT 16, CONCESSION 9 CARADOC DESIGNATED AS PART 2 ON 34R-987 & PART OF LOT 15, CONCESSION 9 CARADOC AS IN 912075 SAVE & EXCEPT PART 1 ON 33R-17865; S/T CA30637, MW107638, MW107639, MW109026, MW109027, MW109028, MW36411 & MW89972 MUNICIPALITY OF STRATHROY-CARADOC		0.21 ha 0.519 ac	(a) Union Gas Limited 50 Keil Drive North Chatham, ON N7M 5M1
3	8529-0044		PT SE 1/2 LT 16 CON 9 AS IN MW81784; S/T MW36086 & MM555 S/T CA30665, MW107263, SUBJECT TO EASEMENT OVER PARTS 1 & 2 ON 33R-16661 AS IN ER474668; TOWNSHIP OF STRATHROY-CARADOC/CARADOC		0.37 ha 0.92 ac	(a) Union Gas Limited 50 Keil Drive North Chatham, ON N7M 5M1
4	08529-0045		PT NW 1/2 LT 14, PT LT 15 & PT SE 1/2 LT 16 CON 9 AS IN CA567, CA1098, CA1099, CA1100, CA1151, CA1152, CA1153, CA16732, CA16733, CA16734 & CA1865 TOWNSHIP OF STRATHROY-CARADOC/CARADOC	Permit	Permit	N/A



**Stantec**

Stantec Consulting Ltd.  
Suite 1 - 70 Southgate Drive  
Guelph ON N1G 4P5  
Tel: (519) 836-6050  
Fax: (519) 836-2493

EB-2013-0191  
Schedule 11  
Page 1 of 4

April 22, 2013  
File: 160960816

Union Gas Limited  
Attention: Mr. Norm Dumouchelle  
750 Richmond Street  
Chatham, ON N7M 5J5

**Reference: Environmental Review – Strathroy-Caradoc Replacement Project**

### **Background**

Union Gas Limited (“Union Gas”) has completed an integrity assessment of its NPS 26 inch Trafalgar Pipeline. The assessment determined the need to replace a section approximately 200m in length located near the intersection of McEvoy Road and Walker’s Drive, Strathroy-Caradoc, Ontario. Stantec Consulting Ltd. (“Stantec”) was retained by Union Gas in March 2013 to complete an Environmental Screening of the pipeline replacement.

It is understood that Union Gas is proposing tree clearing in the fall of 2013 followed immediately by pipeline replacement via trenchless installation. Any tree clearing activities will occur largely via manned chainsaws, with a requirement for some tracked vehicles to cleanup and remove felled material as required. The installation will require excavation of earth material at the entry and exit locations. Construction access will occur from Walker’s Drive and McEvoy Road.

The following analysis identifies potential environmental and socio-economic impacts that may occur as a result of the Strathroy-Caradoc Replacement Project (the “Project”). Background data were collected and reviewed to identify environmental constraints, including consideration of the following information sources:

- The Natural Heritage Information Centre database was searched to obtain historic records of provincially rare, endangered, threatened or special concern species within the vicinity of the work area. Provincial wildlife atlases were also consulted for birds, mammals and reptiles and amphibian species (including those at risk) known to occur in the area;
- Department of Fisheries and Oceans Species at Risk mapping was used to identify any watercourses;
- The Ministry of Natural Resources’ (MNR) Land Information Ontario database was used to gather information on the presence of provincially significant and unevaluated wetlands, Areas of Natural and Scientific Interest (ANSIs), conservation areas and parks;
- The County of Middlesex Official Plan was consulted to identify any municipal land use designations;
- The ‘Strathroy to Lobo Trafalgar Line Expansion Environmental Assessment’ (2004) was reviewed to identify general information about the work areas and previous approvals;
- Air photos were interpreted to identify general information about the work areas; and,
- A site reconnaissance occurred on April 3, 2013.



April 22, 2013  
Page 2 of 4

**Reference: Environmental Screening – Strathroy-Caradoc Pipeline Replacement**

## **Environmental Constraints**

### ***Physiography***

The Site is located within the Caradoc Sand Plains physiographic region as described by Chapman and Putnam (1984). Topography of the region is relatively flat, although the work zone is situated in an area of elevated topography compared to the surrounding landscape.

Efforts to minimize erosion and sedimentation should follow applicable Union Gas standards and procedures, including the use, inspection and maintenance of sediment barriers, erosion control measures and revegetation practices.

### ***Soils***

During the installation of the NPS 48 Trafalgar Pipeline, near the current pipeline replacement work zones, Soybean Cyst Nematode (SCN) was identified in neighboring fields to the east.

A pre-construction soil sampling program should be implemented for the agricultural fields, subject to landowner approval. If SCN impacted areas are discovered, Union should follow their Generic SCN Procedures 2010 which outline mitigation measures such as the use of machine washing stations, restricted access to impacted lands and a topsoil preservation plan.

### ***Surficial Aquatic Features***

Crawford Drain, located adjacent to the Project location, is regulated by the St. Clair Region Conservation Authority (SCRCA).

Stantec recommends that consultation with the SCRCA take place to confirm that the current pipeline replacement work zones do not overlap with any regulated lands. Should work occur within regulated lands, a permit under O. Reg. 171/06 will be required.

### ***Groundwater***

Due to the nature of surficial materials in the area surrounding the work zone (i.e.: sand) there is significant potential to encounter groundwater at shallow depths. The experience of Stantec staff, namely the Environmental Inspector during the NPS 48 Trafalgar Pipeline installation, has indicated that significant volumes of groundwater were encountered during construction at a site within 500 m of the current pipeline replacement work zones.

Stantec recommends that Union Gas confirm the depth to water prior to commencing the replacement. A Ministry of the Environment permit to take water will be required if groundwater taking exceeds 50,000 L/day.

### ***Vegetation***

Vegetation communities were assessed during the April 3, 2013 site visit. It was determined that the work area will occur on agricultural fields (winter wheat and corn), and potentially within a Red Pine Coniferous Plantation. None of the vegetation or vegetation communities identified are classified as rare.

April 22, 2013

Page 3 of 4

**Reference: Environmental Screening – Strathroy-Caradoc Pipeline Replacement**

If clearing activities are required during the migratory bird nesting period (May 1 to July 31), nest surveys should be conducted by a qualified biologist to identify all nests under the Migratory Bird Convention Act using the following standard survey procedure: to the extent practical, tree and/or brush clearing should be completed prior to, or after, the breeding season for migratory birds (May 1 to July 31). Should clearing be required during the breeding bird season, prior to construction, surveys will be undertaken to identify the presence/absence of nesting birds or breeding habitat every 72 hours until clearing is complete or until July 31, whichever comes first. If a nest is located, a designated setback will be marked off within which no construction activity will be allowed while the nest is active. The radius of the setback width ranges from 5-60 m depending on the species. Setback widths are based on the species sensitivity and on setback width recommendations that have been reviewed and approved by Environment Canada.

**Wildlife and Wildlife Habitat**

During field investigations, incidental observations of wildlife or evidence of wildlife activity were recorded. Wildlife observations included tracks and scat and included White-tailed Deer, Eastern Cottontail, Black-capped Chickadee, and Turkey Vulture. Woodland and wildlife habitat assessments were completed for each vegetation community. Standing snags, nests, suitable bat roosting sites, vernal pools, seeps and springs were not observed during site investigations.

Preliminary habitat assessments and/or species specific surveys were conducted for species at risk (e.g., listed provincially as threatened or endangered) identified during background review. A total of thirteen species at risk were identified as potentially occurring within the area. No species at risk were observed during the initial site investigation, and based on available habitat only two species have the potential to occur: Eastern Hog-nosed Snake and Eastern Meadowlark.

No incidental observations were made for snake species during field investigations; however, burrows in the sandy soil substrate of the plantation may provide habitat to support Eastern Hog-nosed Snakes. Investigations are recommended to confirm presence of Eastern Hog-nosed Snake, following MNR guidelines. Surveys should be undertaken in the time period of April, May and June. Should the surveys identify species protected under the *Endangered Species Act, 2007*, consultation should occur with the MNR regarding possible permitting requirements.

Potential habitat for Eastern Meadowlark is present in the cultural meadow habitat located south of the plantation. Due to the size of the habitat, this cultural meadow is not suitable habitat for Bobolink, an area-sensitive species. Should any work be required within the meadow, grassland breeding bird surveys are recommended, following MNR guidelines. Surveys should be undertaken the last week of May, mid-June, and at the end of June. Should the surveys identify species protected under the *Endangered Species Act, 2007*, consultation should occur with the MNR regarding possible permitting requirements.

**Land Use**

The subject stretch of pipeline traverses privately owned agricultural fields, a private woodlot and a rail line owned by Canadian National Railway (CNR). The municipal land use designation at the Site is agricultural.



April 22, 2013  
Page 4 of 4

**Reference: Environmental Screening – Strathroy-Caradoc Pipeline Replacement**

Consultation with CNR should occur to determine permitting and/or monitoring needs specific to the company.

***Contamination***

There is potential to encounter contaminated soil on the CNR railway lands. If unearthed, contaminated soils should not be used as backfill during cleanup and may require specialized disposal. Should the replacement pipeline undergo hydrostatic testing, there is also the potential for the introduction of pollutants into the discharge water.

To determine if contaminated soil is present, Stantec recommends that soil sampling occur within the CNR railway lands prior to pipeline replacement. To assess the potential for contaminated hydrostatic test water, testing of discharged water should be considered. Testing requirements can be influenced by the nature and quality of the source water used, any additives to the test water, the nature of the pipeline and pipeline contents, and the potential for trench water to be contaminated. Union Gas should consult with contamination experts to determine what testing, if any, is necessary for the discharged water.

***Archaeology***

Archaeological assessments (Stages 1-4) were completed by D.R. Poulton & Associates for the NPS 48 Trafalgar Pipeline which is located parallel to the replacement pipeline. All reports were submitted to and accepted by the Ministry of Tourism, Culture and Sport, and no archaeology finds occurred in the immediate vicinity of the current pipeline replacement work zones.

Should any ground disturbance occur outside of previously disturbed pipeline easement, further archaeological investigations are recommended.

**Summary**

Based on the above review, and provided that all referenced mitigation measures are properly implemented, pipeline relocation activities are not anticipated to have significant adverse environmental or socio-economic impacts.

**STANTEC CONSULTING LTD.**

A handwritten signature in black ink, appearing to read 'Mark Knight', is positioned above the printed name.

**Mark Knight, MA, MCIP, RPP  
Environmental Planner**



## Environmental Checklist

The Project Originator is responsible for reviewing and completing the following checklist to determine if the project should be forwarded to EH&S Planning for their review. **When completing this form, please ensure that a Description of Feature is given and that the Proposed Mitigation is identified for those features marked YES in the Impacted column.**

**Project Name:** NPS 26 Replacemnt Project **Project Number:**

**Date:** 2013-03-22

**Project Originator:** Pipeline Engineering

**Project Description:** Union Gas Limited is proposing to replace approximately 200 metres of the existing NPS 26 inch Trafalger pipeline located within the Municipality of Strathroy-Caradoc.

Following testing of the pipeline, metal loss was detected under the Canadian National Railway crossing. Union is proposing to replace the existing line by installing a new section of pipeline using the directional drill method and abandoning the existing line in place.

Feature and Description	Impacted Yes/No	Proposed Mitigation
<b>Water Course Crossings</b> Description: Crossings see attached drawings for locations	No	See sections 3.44 and 3.45 C&M Manual for mitigation. Adhere to SCR and permit requirements
<b>Social Impacts</b> Description: Construction in road allowance Noise, Dust, Traffic, Residential Access	Yes	See sections 18.7 and 18.8 of the C&M manual for mitigation  Noise - to be controlled to the greatest extent possible so as to minimize the disruption of nearby residents (i.e. ensure all equipment have proper mufflers). Dust - control dust as required.
<b>Land use Designations</b> Description:	No	
<b>Agricultural Resources</b> Description: It will be necessary to access the work site on agricultural lands .	Yes	See sections 3.46 and 3.25 C&M Manual for mitigation  - Soybean Cyst Nematode testing needed - Soil compaction monitoring
<b>Vegetation and Wildlife Habitat</b> Description: Speies at Risk Possible Tree Removal	Yes	SAR screening will be completed to determine if surveys are necessary.  If necessary tree removed outside of avian nesting period.
<b>Water Wells and Hydrology</b> Description: Possible trench dewatering	Yes	If necessary to dewater the trench Permit to Take Water will be aquired from the Minisrty of the Environment.

Possible wter well monitoring		Unions standard wter well monitoring program.
<b>Heritage Resources</b> Description: Archaeological Resources (artifacts)	No	A Stage 1 and 2 survey will be undertaken in spring 2013 to determine the potential for artifacts.
<b>Geological Resources and Minerals</b> Description:	No	
<b>Additional Concerns</b> Description:	No	

**TOTAL ESTIMATED ENVIRONMENTAL COSTS**

**NPS 26 REPLACEMENT PROJECT 2013**

**Pre-Construction**

Environmental Review	\$	20,000
Archaeology		10,000
Hearing Costs (Environmental Consultant)		5,000
Species at Risk Surveys		10,000
Water Well Monitoring		10,000
Permits		<u>5,000</u>

**Total Pre-Construction** \$ **60,000**

**Construction**

Environnemental Inspection	\$	5,000
Soil Monitoring		<u>5,000</u>

**Total Construction** \$ **10,000**

**Post Construction**

Site Restoration	\$	<u>5,000</u>
------------------	----	--------------

**Total Post Construction** \$ **5,000**

**Total Estimated Environmental Costs** \$ **75,000**

April 22, 2013  
File: 160960816

Chief Christopher Plain  
Aamjiwnaang First Nation  
978 Tashmoo Ave.,  
Sarnia, ON N7T 7H5

Attention: Chief Christopher Plain

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

Union Gas Limited ("Union Gas") plans to replace a 200 meter stretch of existing 26 inch (660.4 mm) diameter natural gas pipeline located in the Municipality of Strathroy-Caradoc, in the vicinity of Walkers Drive and McEvoy Road. The work is being undertaken as part of the ongoing pipeline maintenance and integrity management program to ensure that Union Gas pipelines remain in safe operating condition at all times. Union Gas regularly inspects the interior and exterior of its pipelines and based on the result of these assessments, Union Gas will take the appropriate action to correct any issues that are found.

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For any questions or concerns regarding the Project, please do not hesitate to contact the undersigned or John Bonin, Union Gas Limited, JBonin@uniongas.com, 519-539-8509, Extension 5021063

Sincerely,

**Norm Dumouchelle**  
Environmental Planner  
Union Gas Limited

Attachment: Study Area Map



April 22, 2013  
File: 160960816

Ms. Sharilyn Johnston  
Aamjiwnaang First Nation  
978 Tashmoo Ave.,  
Sarnia, ON N7T 7H5

Attention: Ms. Sharilyn Johnston

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

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Sincerely,

**Norm Dumouchelle**  
Environmental Planner  
Union Gas Limited

Attachment: Study Area Map



April 22, 2013  
File: 160960816

Chief Thomas Bressette  
Chippewas of Kettle and Stony Point  
6247 Indian Lane, RR#2  
Forest, ON N0N 1J0

Attention: Chief Thomas Bressette

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

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Sincerely,

**Norm Dumouchelle**  
Environmental Planner  
Union Gas Limited

Attachment: Study Area Map



April 22, 2013  
File: 160960816

Mr. Mark Bowlere  
Métis Nation of Ontario  
500 Old St. Patrick St, Unit 3  
Ottawa, ON K1N 9G4

**Attention:** Mr. Mark Bowlere

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

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Sincerely,

**Norm Dumouchelle**  
Environmental Planner  
Union Gas Limited

Attachment: Study Area Map



April 22, 2013  
File: 160960816

Chief Burton Kewayosh  
Walpole Island First Nation  
117 Tahgahoning Road  
Wallacburg, ON N8A 4K9

**Attention:** Chief Burton Kewayosh

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

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Environmental Planner  
Union Gas Limited

Attachment: Study Area Map



April 22, 2013  
File: 160960816

Mr. Dean Jacobs  
Walpole Island First Nation  
RR # 3  
Wallaceburg, ON N8A 4K9

**Attention:** Mr. Dean Jacobs

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

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Sincerely,

**Norm Dumouchelle**  
Environmental Planner  
Union Gas Limited

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April 22, 2013  
File: 160960816

Chief Louise Hillier  
Caldwell First Nation  
14 Orange Street, P.O. Box 388  
Leamington, ON N8H 3W3

Attention: Chief Louise Hillier

**Reference:     *Union Gas Limited – Strathroy to Caradoc – Proposed Natural Gas Pipeline Replacement***

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April 22, 2013  
File: 160960816

Chief Joe Miskokom  
Chippewas of the Thames  
320 Chippewas Road, RR#1  
Muncey, ON N0L 1Y0

Attention: Chief Joe Miskokom

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April 22, 2013  
File: 160960816

Ms. Rolanda Elijah  
Chippewa of the Thames  
70 Anishnaabeg Road  
Muncey, ON N0L1Y0

Attention: Ms. Rolanda Elijah

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Environmental Planner  
Union Gas Limited

Attachment: Study Area Map

May 8, 2013  
File: 160960816

Chief Greg Peters  
Moravian of the Thames  
14760 Schoolhouse,  
Thamesville, ON N0P 2K0

Attention: Chief Greg Peters

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Attachment: Study Area Map  
cc: John Bonin



May 8, 2013  
File: 160960816

Chief Patrick Waddilove  
Munsee-Delaware Nation  
289 Jubilee Rd. RR1  
Muncey, ON N0L 1Y0

Attention: Chief Patrick Waddilove

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Environmental Planner  
Union Gas Limited

Attachment: Study Area Map  
cc: John Bonin





April 22, 2013  
File: 160960816

Chief Joel Abram  
Oneida Nation of the Thames  
2212 Elm Avenue  
Southworld, ON N0L 2G0

Attention: Chief Joel Abram

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