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August 12, 2022

VIA ELECTRONIC FILING

Attention: Nancy Marconi, Registrar of the OEB

Ontario Energy Board
27th Floor, 2300 Yonge Street
Toronto, ON M4P 1E4

Dear Registrar:

**RE: EB-2022-0086 – Enbridge Gas Inc. – Dawn to Corunna Replacement Project
CAEPLA-DCLC Intervenor Evidence**

In accordance with the OEB's Procedural Direction No. 4, please find enclosed for filing in the above noted proceeding the written evidence of the intervenor CAEPLA-DCLC.

Yours truly,

SCOTT PETRIE LLP
LAW FIRM



John D. Goudy

Encl.

c.c.: Parties to EB-2022-0086, *via email*

EB-2022-0086

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, and in particular, sections 90(1) and 97 thereof;

AND IN THE MATTER OF an Application by Enbridge Gas Inc. for an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities from the Township of Dawn Euphemia to St. Clair Township;

AND IN THE MATTER OF an Application by Enbridge Gas Inc. for an Order or Orders approving the proposed forms of agreements for Pipeline Easement and Options for Temporary Land Use.

CAEPLA-DCLC WRITTEN EVIDENCE STATEMENT**August 12, 2022**

1. The Canadian Association of Energy and Pipeline Landowner Associations (“CAEPLA”) is a federally incorporated not-for-profit organization representing landowners from across Canada. CAEPLA has been at the forefront of active engagement with pipeline companies and federal and provincial regulators to develop new and better right-of-way agreements, construction and remediation methodology, and compensation provisions to address the impacts of pipeline construction and operation on agricultural landowners.
2. The Dawn Corunna Landowner Committee (“DCLC”) is a sub-committee of CAEPLA made up of Lambton County landowners whose lands are directly affected by the Dawn to Corunna Replacement Project proposed by Enbridge Gas Inc. (“Enbridge”). DCLC comprises approximately 22 individual owners or ownership groups covering 30 out of the approximately 55 land parcels affected by the project that are not owned by Enbridge itself.
3. CAEPLA-DCLC has intervened in this proceeding to ensure that Enbridge’s construction methodologies and environmental protection measures are held to the highest standards by the OEB. CAEPLA-DCLC and its members also have an interest in ensuring that the form of

landowner agreements to be approved by the OEB pursuant to Section 97 of the *Ontario Energy Board Act* and offered to landowners satisfactorily address, *inter alia*, the accommodation of farming practices and the protection of landowners from costs and liabilities in connection with the Project.

PROPOSED CONSTRUCTION METHODOLOGY – LETTER OF UNDERSTANDING

4. CAEPLA-DCLC advocates the use of a Letter of Understanding (“LOU”) between landowners and pipeline companies to set out commitments made to landowners regarding construction methodology, remediation of affected properties, and various compensation items. For landowners whose properties will be affected by a proposed project, the LOU provides the detail about how construction will be undertaken and what protections will be in place for agricultural lands and operations.

5. For Enbridge’s Dawn Corunna Replacement Project, CAEPLA-DCLC advocates use of the specific form of LOU that has been developed over a number of years through negotiations between Union Gas Limited (one of Enbridge’s legacy companies) and landowner groups in southwestern Ontario and through associated OEB Leave to Construct decisions. CAEPLA-DCLC’s proposed form of LOU is attached as **Attachment 1** to this written evidence.

6. As shown in the LOU comparison table attached as **Attachment 2** to this written evidence, CAEPLA-DCLC’s proposed form of LOU is taken directly from the LOU used by Union Gas Limited and landowners for the Panhandle Reinforcement Project, with minor modifications to reflect the change in company name to Enbridge Gas Inc. (modifications are highlighted in yellow).

7. The Panhandle Reinforcement Project LOU resulted from a settlement between Union Gas Limited and the CAEPLA Panhandle Landowners Committee (“CAEPLA-PLC”) in the OEB EB-2016-0186 Leave to Construct proceeding. Excerpts from the OEB’s Decision and Order in EB-2016-0186 related to the settlement and landowner issues are attached as **Attachment 3** to

this written evidence. Union Gas Limited's letter to the OEB regarding the settlement is attached as **Attachment 4** to this written evidence. A copy of the full Panhandle Reinforcement Project LOU is attached as **Attachment 5** to this written evidence.

8. Like the Dawn Corunna Replacement Project, the Union Gas Limited Panhandle Reinforcement Project involved the installation of an NPS 36 pipeline in agricultural lands in Lambton County with extensive systematic and random tile drainage systems. The cash crop and livestock agricultural operations of CAEPLA-DCLC landowners are similar in nature to the farm operations affected by the Panhandle Reinforcement Project, and the impacts of the Dawn Corunna Replacement Project on agricultural lands and operations are anticipated to be generally the same as those of the Panhandle Reinforcement Project¹.

9. The new NPS 36 Dawn Corunna Replacement Project pipeline is to be installed adjacent to and parallel with several existing Enbridge pipelines. On some CAEPLA-DCLC landowner properties, the new pipeline would parallel 5 existing Enbridge pipelines: the Enbridge TR1 and TR2 NPS 30 pipelines; the Enbridge NPS 10 Waubuno Pool Transmission Line; the Enbridge NPS 20 Payne Pool Transmission Line; and, the Enbridge NPS 8 Distribution Line.

10. Enbridge holds easements for the existing pipelines, including some easements that cover the entirety of the farm property affected. Attached as **Attachment 6** to this written evidence are copies of Enbridge easement agreements (redacted to remove landowner identifying information) that are representative of the easement agreements in place for the 5 existing Enbridge pipelines².

11. The LOU comparison table also shows the development of the LOU through two earlier projects – the Union Gas Limited Dawn Parkway 2016 Expansion Project and the Union Gas Limited NPS 48 Strathroy-Lobo Project. Through successive projects, going back several decades, the LOU has been refined with the input of directly affected landowners and is an

¹ The Union Gas Limited Panhandle Reinforcement Project also involved the removal of an existing pipeline, something that is not proposed as part of the Dawn Corunna Replacement Project.

² The agreements contained in Attachment 6 are those registered on title to PIN 43384-0096 (Instrument Nos. DN23351, L193644, L402741, L423081, L763900).

essential part of protecting the environment and agriculture in the face of what is a large-scale industrial project on agricultural lands.

12. The LOU for the Union Gas Limited Dawn Parkway 2016 Expansion Project resulted in part from a settlement agreement between Union Gas Limited and the Gas Pipeline Landowners of Ontario or “GAPLO” (a member association of CAEPLA) and in part as a result of changes ordered by the OEB at GAPLO’s request in the EB-2014-0261 Leave to Construct hearing process. Excerpts from the OEB’s Decision and Order related to the LOU and landowner issues are attached as **Attachment 7** to this written evidence. A copy of the full Dawn Parkway 2016 Expansion Project LOU is attached as **Attachment 8** to this written evidence.

13. The LOU for the Union Gas Limited NPS 48 Strathroy-Lobo Project was the product of a settlement agreement between GAPLO-Union Strathroy-Lobo and Union Gas Limited in the EB-2005-0550 Leave to Construct proceeding before the OEB. The OEB’s Decision and Order granting leave to construct is attached as **Attachment 9** to this written evidence. The Settlement Agreement between GAPLO-Union (Strathroy-Lobo) and Union Gas Limited is attached as **Attachment 10** to this written evidence. A copy of the full NPS 48 Strathroy-Lobo Project LOU is attached as **Attachment 11** to this written evidence.

14. An important part of the LOU and the construction process for each of the three earlier projects referenced above is the role of the independent construction monitor appointed to be onsite to monitor construction with respect to all issues of concern to landowners and to prepare and file reports with the OEB. The Final Report of the Construction Monitor for the NPS Strathroy-Lobo Project is attached as **Attachment 12** to this written evidence³. The Final Report of the Construction Monitor for the Dawn Parkway 2016 Expansion Project is attached as **Attachment 13** to this written evidence. The Final Report of the Construction Monitor for the Panhandle Reinforcement Project is attached as **Attachment 14** to this written evidence.

³ Appendices E, F and G containing detailed logs have been omitted.

15. Another important component of the LOUs for the previous projects and one that is proposed by CAEPLA-DCLC again for the Dawn Corunna Replacement Project is the GAPLO-Union form of Integrity Dig Agreement to be applied future maintenance operations on the pipeline. CAEPLA-DCLC landowners wish to ensure that all future maintenance activities that will involve soil disturbance and/or the use of vehicles or mobile equipment (including not only pipeline integrity investigation and repair, but also drainage remediation and depth of cover remediation) will be carried out in a consistent manner that minimizes impacts to their properties. The most recent GAPLO-Union Integrity Dig Agreement (that applies under the Panhandle Reinforcement Project LOU) is attached as **Attachment 15** to this written evidence.

FORM OF LANDOWNER AGREEMENT TO BE APPROVED BY THE BOARD

16. With one important difference, the forms of landowner agreements proposed by Enbridge for the Dawn Corunna Replacement Project – the Easement Agreement and the Temporary Land Use Agreement – are the forms previously approved by the OEB in the Leave to Construct proceeding for the Panhandle Reinforcement Project (EB-2016-0186) (which were themselves based on the landowner agreements approved by the OEB for the NPS 48 Strathroy-Lobo Project (EB-2005-0550) and the Dawn Parkway 2016 Expansion Project (EB-2014-0261)). The important difference is that Enbridge has replaced the term “gross negligence” in the indemnity clause with “negligence”, seeking to reduce the indemnity protection afforded to landowners.

17. The same form of agreements, with “gross negligence” used in the indemnity clauses, were also submitted for approval by Enbridge in connection with its 2021 Sarnia Industrial Line Reinforcement Project in EB-2019-0218. These agreements were approved by the OEB. Relevant excerpts from the OEB’s Decision and Order in EB-2019-0218 are attached as **Attachment 16** to this written evidence.

18. However, in the subsequent Greenstone Pipeline Project (EB-2021-0205), Enbridge modified the previously approved forms of landowner agreements to replace the term “gross

negligence” with “negligence” and advised the OEB that the change was “minor and of housekeeping nature.” The OEB approved the agreements as modified and Enbridge relies on that approval in its application for approval of the landowner agreements for the Dawn Corunna Replacement Project. Excerpts from Enbridge’s Application for the Greenstone Pipeline Project related to the landowner agreements are attached as **Attachment 17** to this written evidence. Enbridge’s Answer to OEB Staff Interrogatory 9 in EB-2021-0205 regarding the change to the form of Easement Agreement is attached as **Attachment 18** to this written evidence. Excerpts from the OEB’s Decision and Order in EB-2021-0205 concerning the landowner agreements are attached as **Attachment 19** to this written evidence.

19. CAEPLA-DCLC will submit to the OEB that the forms of Easement Agreement and Temporary Land Use Agreement previously approved for the Panhandle Reinforcement Project (EB-2016-0186) and the 2021 Sarnia Industrial Line Reinforcement Project (EB-2019-0218) using the term “gross negligence” in the indemnity clauses should be required for the Dawn Corunna Replacement Project.

This written evidence statement was prepared under the direction of the CAEPLA-DCLC Negotiating Committee (Pat Murphy, Chad Anderson, Brad Nicholson, Andrew Vandersteen, Bryan Bogaert, Dave Core, Annette Schinborn and Rick Kraayenbrink).

August 12, 2022

ATTACHMENT 1

LETTER OF UNDERSTANDING ("LOU")

2023 Dawn-Corunna Project – NPS 36 Natural Gas Pipeline

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SCHEDULE 1: SETTLEMENT

SCHEDULE 2: SITE SPECIFIC ISSUES

SCHEDULE 3: WOODLOT EVALUATION

SCHEDULE 4: AESTHETIC TREE EVALUATION

SCHEDULE 5: SCHEDULE OF RATES FOR WORK

SCHEDULE 6: WET WEATHER SHUTDOWN

SCHEDULE 7: TOPSOIL STRIPPING MAP

SCHEDULE 8: INTEGRITY DIG AGREEMENT

**LETTER OF UNDERSTANDING
("LOU")**

Between:

«Company»
«first_name1» «last_name1»
«first_name2» «last_name2»
«first_name3» «last_name3»
«first_name4» «last_name4»

hereinafter referred to as the "**Landowner**"

and

ENBRIDGE GAS INC.

hereinafter referred to as the "**Company**"

INTRODUCTION

The Company has applied to the Ontario Energy Board to construct a NPS 36 pipeline which will run approximately 20 kilometres starting at the existing Enbridge Gas Inc. Dawn Operations Centre and terminating at the existing Enbridge Gas Inc. Corunna Compressor Station. As a result it will be necessary for the Company to enter onto the Landowner's property for the construction and installation of the NPS 36 pipeline (the "Project").

The Company recognizes that the construction of the pipeline will result in damage to the Landowner's property and a disruption to the Landowner's daily activities for which the Company is obligated to compensate the Landowner and observe various construction techniques to minimize such damages.

It is the policy of the Company that Landowners affected by its pipeline projects be dealt with on a consistent basis that is fair to both parties. This Letter of Understanding represents the results of negotiations between the Company and the Landowner and outlines the obligations of each party with respect to:

- i) The construction of the pipeline;
- ii) Remediation of the Landowner's property; and,
- iii) Compensation to the Landowner for various damages as a result of the construction of the pipeline.

The parties acknowledge that the Company is required to adhere to all of the conditions set out in the Leave to Construct Order of the Ontario Energy Board and that the foregoing are additional undertakings that the Company has agreed upon with the Landowner on the Project. A copy of the Conditions of Approval will be mailed to the Landowner upon request.

1. Pre-Construction Meeting

Prior to construction, the Company's representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.

2. Testing For Soybean Cyst Nematode

In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company, in consultation with the Landowner and Joint Committee, will work with OMAFRA to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests. Upon request of the Landowner the Company will also conduct soil testing for other

nematodes, pests and diseases including sugar beet nematode, with protocol to be developed and implemented where other nematodes, pests or diseases are present.

3. **Continued Supply of Services**

Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.

4. **Water Wells**

To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner. Lab testing results will be made available to the Landowner on request. Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.

5. **Staking of Work Space**

The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area. Where topsoil is to be stored off easement the stakes will not be removed during the stripping operation.

The stakes will be located at 30 metre (98.4 foot) intervals prior to construction and will be spray painted or otherwise marked in red. The intervals or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.

The Company will restake the easement limit for post construction tile work at the request of the Landowner.

6. **Topsoil Stripping**

Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately, with one meter separation, and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.

The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.

If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil. At the Landowner's request, separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.

At the recommendation of the Company's Soils Consultant and/or at the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.

On areas where topsoil is to be stripped, the Company will undertake soil testing to identify any areas where topsoil that has not previously been disturbed by pipeline construction activities can be kept separate from previously undisturbed topsoil. Where such areas are identified, the Company will strip and pile previously disturbed and previously undisturbed topsoil separately, as identified on the map attached as Schedule 7.

At the request of the Landowner, a mulch layer will be provided between the existing topsoil and stripped topsoil. Where sufficient crop is present the standing crop will be used as the mulch layer. Otherwise, Enbridge Gas Inc. will provide straw as a mulch layer.

7. Depth of Cover

The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.

If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate facilities such as drainage and/or processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.

8. Levelling of Pipe Trench

During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.

If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:

- i) 0 to 4 inches - no additional work or compensation.
- ii) Greater than 4 inches - the Company will either:
 - (a) Strip topsoil, fill the depression with subsoil and replace topsoil, or
 - (b) Repair the settlement by filling it with additional topsoil.

If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:

- i) 0 to 4 inches - no additional work or compensation;
- ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil;
- iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner.

If following over-wintering of the topsoil, return to grade and the establishment of a cover crop, there is identifiable subsidence in excess of two (2) inches the Company will restore the affected area to grade with the importation of topsoil.

If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.

9. Topsoil Replacement, Compaction Removal and Stone Picking

The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.

Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.

The Company will pick stones prior to topsoil replacement.

Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter. After topsoil replacement, the topsoil will be tilled with an implement(s) as agreed by the Company and Landowners.

After cultivation, the Company will pick stones again.

The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.

If agreed to by the parties, the Company will return in the year following construction and will cultivate, chisel plough and /or deep till the easement area. When necessary, to accommodate planting schedules, the Landowner should perform tillage themselves, at the Company's expense (see Schedule of Rates attached as Schedule 5).

For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than 4 inches, by hand/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones in the years following where there is a demonstrable need.

10. Drainage Tiling

The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will consider reasonable requests by the Landowner to construct additional tile runs near damaged lands. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company's activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company's activities, including future maintenance operations and problems caused by the Company's contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company's operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner's satisfaction.

The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior to, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or temporary tile construction required on their land. The Consultant will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.

Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre-construction tiling plans where required. The purpose of pre-construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement and temporary land use limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or greater crossing the easement. The Company will ensure that any such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.

During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan

and profile for each affected owner. These post construction tile plans will show the Landowner exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.

During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.

The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.

Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:

- i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, or stone pit drain with pea gravel, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.
- ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will consider adding two drains between pipelines where necessary. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.

The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.

In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.

Once the tiling is complete the Consultant will adjust all tile plans to reflect the as-constructed information and a copy will be provided to the Landowner for their records.

11. Water Accumulation during Construction

The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.

12. Access Across the Trench

Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from crossing the trench

line with farm equipment, the Company will improve crossing conditions either by further replacement and/or compaction of subsoil at the previous plug locations. Should conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.

Following construction, the Company shall ensure that the landowner shall have access across the former trench area and easement.

13. Restoration of Woodlots

If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Enbridge Gas Inc. will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.

14. Tree Replacement

The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.

For windbreaks/hedgerows the Company will implement the following practice:

- i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.
- ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.

The Company will warrant such trees for a period of three years following planting, provided the Landowner waters the trees as appropriate after planting.

15. Covenants

Company covenants as follows:

- i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.
- ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.
- iii) Whenever possible, all vehicles and equipment will travel on the trench line.
- iv) All subsoil from road bores will be removed.
- v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.
- vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.
- vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.
- viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.
- ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.
- x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages.
- xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.
- xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.

- xiii) To ensure suitable passage and land access for agricultural equipment during construction.
- xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription to rectify the problem, which will be implemented at the cost of the Company.
- xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.
- xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil. The Company will provide the results of the testing to the Landowner.
- xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.
- xviii) To implement the Integrity Dig Agreement in the form attached hereto as Schedule 8 for all integrity and maintenance operations on the pipeline.
- xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined the cover over the pipeline is less than 0.9 metres, the Company shall, unless the Landowner agrees otherwise, restore depth of cover to a minimum of 0.9 meters with the importation of topsoil or by lowering the pipeline. In areas where the top of the pipe is at or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.
- xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company's Consultant and be from a source approved by the landowner.
- xxi) To implement Enbridge Gas Inc.'s wet soil shut down practice as described in Schedule 6.
- xxii) The Company will not open more than 6.0 continuous kilometers of open trench per construction spread at a time.
- xxiii) The Company shall consult with the Landowner and/or Landowner's agent(s) with respect to the existing farm biosecurity protocols and requirements in effect on the Lands (including those protocols and requirements designed to prevent the transmission of pests and diseases and those designed to preserve the integrity of organic or specialty agriculture production). Whenever present on the Lands, the Company will conduct activities in a manner that respects existing farm biosecurity protocols and requirements in effect.
- xxiv) The Company agrees to implement one joint committee for the project under the terms of reference set out in article 31 hereof.
- xxv) The Company shall consult with the Landowner prior to any removal of an object from in or on the Temporary Land Use area pursuant to the Temporary Land Use Agreement.

Landowner covenants as follows:

- i) To execute a Clean-up Acknowledgement when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction accompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.
- ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.
- iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.

- iv) To only access the work area when accompanied by the Company's designated representative. The Company will facilitate the Landowner's access to the work area upon request.

16. Dispute Resolution

In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:

- i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,
- ii) The establishment of levels of compensation for specialty crops as in Article 21.
- iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.

In addition, in the event that a dispute arises between the Landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to article 31 the Company may retain a mutually satisfactory independent consultant to assist in the resolution of the particular dispute.

Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Land Tribunal to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.

17. Land Rights - Easements

Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.

Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at an Ontario Land Tribunal Compensation Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.

18. Land Rights – Temporary Land Use Agreements and Top Soil Storage

These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.

19. Damage Payments

Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements, and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is completed. Top soil storage damages will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.

20. Disturbance Damages

Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer. Other land uses may qualify for Disturbance Damages which are site-specific in nature and

recognize the particular circumstances of the use being interfered with. Enbridge Gas Inc. will negotiate with the affected Landowner to address these site-specific issues.

21. Construction Damages – Crop Loss

The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:

- i) year of construction and future crop loss;
- ii) stone picking beyond the second year following construction;
- iii) Crop losses associated with establishment of a cover crop.

Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the "One Time" program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.

Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:

- i) Third year crop loss under "One Time" Program = 50%.
- ii) Actual crop loss following investigation and sampling = 60%.
- iii) Difference payable to Landowner = 10%.

Crop Loss for topsoil storage Areas

Compensation for crop loss on topsoil storage areas will be as follows:

- In year of construction - 100% crop loss;
- In years after construction - measured crop loss;
- Payments will be based upon actual area used for topsoil storage;
- Compensation will not be prepaid;
- Compensation will be paid on an as incurred basis.

Speciality Crops

The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project for specialty crops. Specialty crops include tobacco, produce (eg. carrots, peas, lentils) sugar beets and registered seeds. In the event the Landowner does not want to accept the one-time settlement compensation will be negotiated on a site specific basis.

Post construction cover crop program

In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by OMAFRA (or such replacement publication as may be issued by OMAFRA). The cost of seed planted over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.

22. Woodlots and Windbreak/Hedgerow Trees

The Company will assess the woodlot or hedgerow area(s) to be affected by the Project and will provide a report to the Landowner identifying the trees that will be affected.

With respect to compensation for damage to woodlots, the Landowner will have the following two options:

Option 1:

Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company and satisfactory to the Landowner, acting reasonably. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.

Option 2:

The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.

With respect to compensation for damage to other wooded areas:

Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.

Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.

The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected Landowners and payment will be made in accordance with the reports.

The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.

23. Gored Land

The Company agrees to pay the Landowner 100% crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project. At the Landowner's request, the Company will plant a cover crop on gored land.

24. Insurance

Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage per occurrence.

25. Abandonment

Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner

26. Liability

The Company shall assume all liability and obligations for any and all loss, damage or injury (including death) to person(s) or property that would not have happened but for the Project and this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Landowner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not liable be to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Landowner.

27. Assignment

All rights and obligations contained in this agreement shall extend to, be binding upon, and inure 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. The Company shall not assign this agreement without prior written notice to the Landowner and, despite such assignment, the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.

28. Site Specific Issues

Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.

29. Compensation Levels

The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.

30. Independent Construction Monitor

The Company agrees to the appointment of an independent construction monitor for construction on agricultural lands for this project. The construction monitor will be chosen by a committee consisting of one representative from each of Enbridge Gas Inc., the OEB and CAEPLA-DCLC. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to the Landowners and the Company at all times.

The scope of work for the construction monitor will be:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between Landowners and Enbridge Gas Inc.;
3. To review all specific construction commitments included in Enbridge Gas Inc.’s construction contract;
4. To respond to specific requests by Landowners and the committee within 24 hours while maintaining limited contact with Landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

Enbridge Gas Inc. further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to the CAEPLA-DCLC representative. The Company’s agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.

The Company shall provide the construction monitor with a schedule of planned construction activities and not less than 24 hours’ notice of any clearing, topsoil stripping, grading, and/or reclamation activities and the construction monitor shall be provided free access, subject to safety requirements, to all construction activities.

31. Landowner Relations and Terms of Reference of Joint Committee

Committee Make-Up

- i) Members shall be affected Landowners, and appropriate representatives of the Company. The Joint Committee shall be composed of two CAEPLA-DCLC Landowner representatives and three representatives of the Company. CAEPLA-DCLC shall have the right to appoint an alternate representative.

In addition to Wet Soils Shutdown issues, the Joint Committee’s purpose is to:

- i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company;
- ii) provide a brief overview of issues/concerns raised during and following construction; and,
- iii) consider which items should be included in a Post Construction Report.

The objective of the Joint Committee is to:

- i) to provide a vehicle to address issues/concerns which arise during and following construction;
- ii) to deal with any unforeseen circumstances which may arise during or following construction; and,

- iii) to provide an opportunity for landowners to comment on how Enbridge Gas Inc. might improve future construction practices.

In reviewing the foregoing, the types of issues which may be addressed are as follows:

- i) Landowner concerns that arise during and following construction;
- ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed;
- iii) methods of anticipating and avoiding these circumstances in the future; and,
- iv) review of ongoing construction practices and procedures which might be improved in future construction.

Duration of the Joint Committee

- i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. CAEPLA-DCLC shall be responsible for recruiting the CAEPLA-DCLC Landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.

Payment to Landowner members

- i) The Company will pay to each Landowner member of the Joint Committee including both CAEPLA-DCLC primary and alternate representatives, at his or her direction, a total payment of \$15,000 plus H.S.T. as an honorarium for his or her participation on the committee.

32. Integrity Dig Agreement

The Integrity Dig Agreement attached hereto as Schedule 8 will be utilized for all integrity and maintenance digs conducted on this pipeline and on any other existing Enbridge Gas Inc. pipelines on the Landowner’s property. The per acre land value and the Average Annual Crop Revenue set out in Schedule 8 will apply for the calculation of digs commenced prior to January 1, 2027. Per acre land value and Average Annual Crop Revenue amounts will be updated by agreement of the Company and CAEPLA-DCLC, acting reasonably, effective January 1, 2027 and every five years thereafter.

Dated at _____, Ontario this ____ day of _____, 2022.

ENBRIDGE GAS INC.

Name & Title:

Dated at _____, Ontario this ____ day of _____, 2022.

Witness:

Landowner:

Landowner:

Landowner:

Landowner:

SCHEDULE 1: SETTLEMENT

Property No.: ____, Landowner(s): _____

The parties to this Letter of Understanding dated the ____ day of _____, 2022, in consideration of making this settlement have summarized below all the obligations, claims, damages and compensation arising from and for the required land rights and the pipeline construction across the Landowner(s)' property, name: _____.

(Check all applicable items of compensation)Yes NoLAND RIGHTS

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Easement @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Temporary Land Use @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Topsoil Storage Land Use @	\$	per acre

DAMAGES

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Disturbance @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Disturbance @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Disturbance @	\$	per acre of Top Soil Storage area

CROP LOSS

<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of Top Soil Storage area

NON-AGRICULTURAL DAMAGE PAYMENTS

<input type="checkbox"/>	<input type="checkbox"/>	Non-agricultural Lands @	\$	per acre
<input type="checkbox"/>	<input type="checkbox"/>	Woodlots @	\$	per acre

OBLIGATIONS

<input type="checkbox"/>		a) This Letter of Understanding.
<input type="checkbox"/>	<input type="checkbox"/>	b) Attached as Schedule 2 any other special requirements or compensation issues.

Initialed for identification by owner(s): _____.

Approval (Enbridge Gas Inc.): _____.

SCHEDULE 2: SITE SPECIFIC ISSUES

Property No.:____, Landowner(s): _____

SCHEDULE 3

WOODLOT EVALUATION

At the time of signing of the Letter of Understanding the Landowners with woodlots will be given three options.

1. take a one time full and final for the total easement.
2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately.
3. take the crop monitoring program and have the woodlot evaluated separately.

Woodlots will be assessed in the following manner:

A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management.

This volume will then be determined on an annual basis.

Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot.

This value will then be present valued using the same formula as the one time payment option.

SCHEDULE 4

AESTHETIC TREE EVALUATION

The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values.

During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes.

Enbridge Gas Inc. would contract a qualified person to complete an evaluation of the trees.

The Landowners would be paid the evaluated price for the trees in addition to other payments.

If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment.

If the Landowner disagrees with Enbridge Gas Inc.'s evaluation a second evaluation may be completed using the same criteria as the original evaluation.

EVALUATION CRITERIA

A four part evaluation criteria will be completed for aesthetic trees:

Tree Value = Basic Value **X** Species Rating **X** Condition Rating **X** Location Rating

Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area.

Species rating is a percentage rating based on the relative qualities of the tree species.

Condition rating is a percentage rating based on the health of the tree.

Location rating is a percentage rating based on the location of the tree.

SCHEDULE 5

Schedule of Rates for Work
Performed by Landowners

Typically all work will be done by the Company. If the parties agree that the Landowner will perform work on behalf of the Company, the Company will remunerate the Landowner in accordance with the following;

- | | | | |
|----|-----------------|------------|---------------------------------------|
| 1. | Stone picking | - \$30.00 | per hour/per person picking by hand |
| | | - \$100.00 | per hour for use of tractor and wagon |
| 2. | Chisel Plowing | - \$185.00 | per hour |
| 3. | Cultivation | - \$160.00 | per hour |
| 4. | Tile Inspection | - \$45.00 | per hour * |

* Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.

SCHEDULE 6

Wet Soils Shutdown

The following sets out the Wet Soils Shutdown practice of Enbridge Gas Inc. for pipeline construction, repair and maintenance on agricultural lands.

Wet soils shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required.

While constructing the Company's pipeline the Company's senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors, or other Company representatives and other members of the Joint Committee with assistance of the construction monitor, the right-of-way conditions on agricultural lands are such that construction would have an adverse effect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors and other Company representatives and other members of the Joint Committee, with the assistance of the construction monitor, shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e., whether traffic be re-routed within the easement lands around wet area(s) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives and other members of the Joint Committee, with assistance of the construction monitor, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse effects on the soils.

Wet soils shutdown is a routine part of Enbridge Gas Inc.'s normal management process for pipeline construction activities. In recognition of this, Enbridge Gas Inc. budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Enbridge Gas Inc.'s inspection staff and the Joint Committee, with the assistance of the construction monitor, are responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. Where construction activities are undertaken by the Company in wet soil conditions, additional mitigation measures may be put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Enbridge Gas Inc. on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Enbridge Gas Inc. Enbridge Gas Inc. will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted. Where construction activities are undertaken by the Company in wet soil conditions (as determined by the construction monitor), the Company shall pay to the landowner 150% of disturbance and crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150% payment applies only once to any one area; on areas where the 150% payment is applied, the Landowner forfeits the right to top-up of crop loss payments under this agreement. The 150% payment does not affect the Landowner's right to topsoil replacement where crop loss exceeds 50% in the fifth year following construction.

SCHEDULE 7
Topsoil Stripping Map

To be inserted

SCHEDULE 8
Integrity Dig Agreement

To be inserted

ATTACHMENT 2

CAEPLA-DCLC LETTER OF UNDERSTANDING COMPARISON CHART – EB-2022-0086

STRATHROY LOBO EB-2005-0550	HAMILTON MILTON EB-2014-0261	PANHANDLE EB-2016-0186	CAEPLA-DCLC PROPOSAL EB-2022-0086
<p>1. PIPELINE CONSTRUCTION PROCEDURES Prior to construction, Union's project manager or designated agent shall visit with each affected landowner to review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this agreement.</p>	<p>1. Pre-Construction Meeting Prior to construction, the Company's representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.</p>	<p>1.Pre-Construction Meeting Prior to construction, the Company's representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.</p>	<p>1. Pre-Construction Meeting Prior to construction, the Company's representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.</p>
<p>8. TESTING FOR SOY BEAN CYST NEMATODE In consultation with the landowner, the Company agrees to sample all agricultural easements along the pipeline route of this project, before construction, and any soils imported to the easement lands for the presence of soy bean cyst nematode (SCN) and provide a report of test results to the landowner. In the event the report indicates the presence of SCN, the Joint Committee will work with OMAFRA and the University of Guelph to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests.</p>	<p>2. Testing For Soybean Cyst Nematode In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company will work with OMAFRA to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests.</p>	<p>2. Testing For Soybean Cyst Nematode In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company, in consultation with the Landowner and Joint Committee, will work with OMAFRA to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests. Upon request of the Landowner the Company will also conduct soil testing for other nematodes, pests and diseases including sugar beet nematode, with protocol to be developed and implemented where other nematodes, pests or diseases are present.</p>	<p>2. Testing For Soybean Cyst Nematode In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company, in consultation with the Landowner and Joint Committee, will work with OMAFRA to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests. Upon request of the Landowner the Company will also conduct soil testing for other nematodes, pests and diseases including sugar beet nematode, with protocol to be developed and implemented where other nematodes, pests or diseases are present.</p>

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(t) Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected landowners prior to service interruption. In the case of accidental interruption, temporary services will be provided by the Company at the earliest possible opportunity.	3. Continued Supply of Services Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.	3. Continued Supply of Services Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.	3. Continued Supply of Services Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.
<p>3. WATER WELLS To ensure that the quality and quantity (i.e. static water levels) of well water is maintained, a pre, during and post construction monitoring program will be implemented for all drilled wells within 100 metres of the proposed pipeline, for all dug wells within 100 metres and for any other wells recommended by the Company's hydrogeology consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Their report will be made available to the landowner on or before the filing of the final post-construction monitoring report.</p> <p>Should a well be damaged (quantity and/or quality) from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.</p>	<p>4. Water Wells To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner.</p> <p>Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.</p>	<p>4. Water Wells To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner. Lab testing results will be made available to the Landowner on request.</p> <p>Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.</p>	<p>4. Water Wells To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner. Lab testing results will be made available to the Landowner on request.</p> <p>Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.</p>
<p>1.(b) The Company agrees to stake the outside boundary of the work space which will include easement, temporary work room, or topsoil storage areas. Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation.</p> <p>The stakes will be located at 30 metre (98.4 foot) intervals prior to construction. The intervals or distance between stakes may decrease as</p>	<p>3. Staking of Work Space The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area.</p> <p>The stakes will be located at 30 metre (98.4 foot) intervals prior to construction. The intervals or distance between stakes may decrease as</p>	<p>5. Staking of Work Space The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area. Where topsoil is to be stored off easement the stakes will not be removed during the stripping operation.</p> <p>The stakes will be located at 30 metre (98.4 foot) intervals prior to construction and will be spray painted or otherwise marked in red. The intervals</p>	<p>5. Staking of Work Space The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area. Where topsoil is to be stored off easement the stakes will not be removed during the stripping operation.</p> <p>The stakes will be located at 30 metre (98.4 foot) intervals prior to construction and will be spray painted or otherwise marked in red. The intervals or</p>

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<p>deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.</p> <p>The Company will restake the easement limit for post construction tile work at the request of the landowner.</p>	<p>deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.</p>	<p>or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.</p> <p>The Company will restake the easement limit for post construction tile work at the request of the Landowner.</p>	<p>distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.</p> <p>The Company will restake the easement limit for post construction tile work at the request of the Landowner.</p>
<p>1. (a) Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately and Union will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the landowner, topsoil will be ploughed before being stripped to a depth as specified by the landowner.</p> <p>The Company will strip topsoil across the entire width of the easement at the request of the landowner, provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the landowner.</p> <p>Further, if the landowner so requests the Company will not strip topsoil with the topsoil/subsoil mix being placed on the spoil side of the easement on top of the existing topsoil.</p> <p>At the landowners request separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.</p>	<p>4. Topsoil Stripping Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.</p> <p>The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.</p> <p>If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil.</p>	<p>6. Topsoil Stripping Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately, with one meter separation, and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.</p> <p>The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.</p> <p>If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil.</p> <p>At the Landowner's request, separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.</p>	<p>6. Topsoil Stripping Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately, with one meter separation, and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.</p> <p>The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.</p> <p>If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil.</p> <p>At the Landowner's request, separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.</p>

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<p>1.(h) At the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.</p> <p>At the request of a landowner a mulch layer will be provided between the existing topsoil and the stripped topsoil pile in situations where a crop is not present.</p>	<p>At the recommendation of the Company's Soils Consultant and/or at the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.</p>	<p>At the recommendation of the Company's Soils Consultant and/or at the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.</p> <p>On areas where topsoil is to be stripped, the Company will undertake soil testing to identify any areas where topsoil that has not previously been disturbed by pipeline construction activities can be kept separate from previously undisturbed topsoil. Where such areas are identified, the Company will strip and pile previously disturbed and previously undisturbed topsoil separately, as identified on the map attached as Schedule 9.</p> <p>At the request of the Landowner, a mulch layer will be provided between the existing topsoil and stripped topsoil. Where sufficient crop is present the standing crop will be used as the mulch layer. Otherwise, Union will provide straw as a mulch layer.</p>	<p>At the recommendation of the Company's Soils Consultant and/or at the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.</p> <p>On areas where topsoil is to be stripped, the Company will undertake soil testing to identify any areas where topsoil that has not previously been disturbed by pipeline construction activities can be kept separate from previously undisturbed topsoil. Where such areas are identified, the Company will strip and pile previously disturbed and previously undisturbed topsoil separately, as identified on the map attached as Schedule 7.</p> <p>At the request of the Landowner, a mulch layer will be provided between the existing topsoil and stripped topsoil. Where sufficient crop is present the standing crop will be used as the mulch layer. Otherwise, Enbridge Gas Inc. will provide straw as a mulch layer.</p>
<p>1.(g) The Company will install the pipeline with a minimum of 1.2 metres of coverage.</p> <p>If the Company, acting reasonably, determines in consultation with the landowner and drainage expert that it is necessary to increase the depth of the Pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, Union will provide for additional depth of cover.</p>	<p>7. Depth of Cover The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.</p> <p>If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate current processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.</p>	<p>7. Depth of Cover The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.</p> <p>If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate facilities such as drainage and/or processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.</p>	<p>7. Depth of Cover The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.</p> <p>If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate facilities such as drainage and/or processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.</p>

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<p>(i) During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The landowner shall have the right of first refusal on any such excess material.</p> <p>If trench subsidence occurs the year following construction, the following guidelines will be observed:</p> <p>(i) 0 to 4 inches - no additional work or compensation.</p> <p>(ii) Greater than 4 inches - the Company will strip topsoil, fill the depression with subsoil and replace topsoil. If it is cost effective the Company will repair the settlement by filling it with additional topsoil.</p> <p>If mounding over the trench persists the year following construction, the following guidelines will be observed:</p> <p>(i) 0 to 4 inches - no additional work or compensation.</p> <p>(ii) Greater than 4 inches the Company will strip topsoil, remove excess subsoil and replace topsoil</p> <p>(iii) Should adequate topsoil depth be available, the mound can be levelled at the request of the Landowner. If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4" level stated above, the Company will remove the restriction by one of the methods described above.</p> <p>(j) If following over-wintering of the topsoil, return to grade and the establishment of a cover crop, there is identifiable subsidence in excess of 2 inches the Company will restore the</p>	<p>8. Levelling of Pipe Trench During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.</p> <p>If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:</p> <p>i) 0 to 4 inches - no additional work or compensation.</p> <p>ii) Greater than 4 inches - the Company will either:</p> <p>(a) Strip topsoil, fill the depression with subsoil and replace topsoil, or</p> <p>(b) Repair the settlement by filling it with additional topsoil.</p> <p>If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:</p> <p>i) 0 to 4 inches - no additional work or compensation;</p>	<p>8. Levelling of Pipe Trench During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.</p> <p>If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:</p> <p>i) 0 to 4 inches - no additional work or compensation.</p> <p>ii) Greater than 4 inches - the Company will either:</p> <p>(a) Strip topsoil, fill the depression with subsoil and replace topsoil, or</p> <p>(b) Repair the settlement by filling it with additional topsoil.</p> <p>If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:</p> <p>i) 0 to 4 inches - no additional work or compensation;</p>	<p>8. Levelling of Pipe Trench During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.</p> <p>If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:</p> <p>i) 0 to 4 inches - no additional work or compensation.</p> <p>ii) Greater than 4 inches - the Company will either:</p> <p>(a) Strip topsoil, fill the depression with subsoil and replace topsoil, or</p> <p>(b) Repair the settlement by filling it with additional topsoil.</p> <p>If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:</p> <p>i) 0 to 4 inches - no additional work or compensation;</p>

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<p>affected area to grade with the importation of topsoil.</p>	<p>ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil; iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner.</p> <p>If the topsoil is over wintered and subsidence occurs in the year following top soil replacement the following guidelines will be observed: i) 0 to 4 inches - no additional work or compensation. ii) Greater than 4 inches - the Company will repair the settlement by filling it with additional topsoil. If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.</p>	<p>ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil; iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner. If following over-wintering of the topsoil, return to grade and the establishment of a cover crop, there is identifiable subsidence in excess of two (2) inches the Company will restore the affected area to grade with the importation of topsoil.</p> <p>If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.</p>	<p>ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil; iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner.</p> <p>If following over-wintering of the topsoil, return to grade and the establishment of a cover crop, there is identifiable subsidence in excess of two (2) inches the Company will restore the affected area to grade with the importation of topsoil.</p> <p>If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.</p>
<p>1.(k) The Company will also pick stones prior to topsoil replacement. The subsoil will be worked with a subsoiling implement, as agreed by the Company and the Landowner Committee. After topsoil replacement, the topsoil will be tilled with an implement(s) as agreed by the Company and the Landowner Committee. Stones 50 mm (2") in diameter and larger will be picked by hand and/or with a mechanical stonepicker. The subsoil on the easement will be tilled again as above.</p>	<p>9. Topsoil Replacement, Compaction Removal and Stone Picking The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.</p> <p>Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.</p> <p>The Company will pick stones prior to topsoil replacement.</p> <p>Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter. After topsoil replacement, the topsoil will be tilled</p>	<p>9. Topsoil Replacement, Compaction Removal and Stone Picking The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.</p> <p>Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.</p> <p>The Company will pick stones prior to topsoil replacement.</p> <p>Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter. After topsoil replacement, the topsoil will be tilled with</p>	<p>9. Topsoil Replacement, Compaction Removal and Stone Picking The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.</p> <p>Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.</p> <p>The Company will pick stones prior to topsoil replacement.</p> <p>Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter. After topsoil replacement, the topsoil will be tilled with an</p>

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<p>1.(aa) The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the landowner. Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.</p> <p>1.(m) After the topsoil replacement, the topsoil will be tilled (see section k) and stones picked. If requested by the landowner, the Company will cultivate the topsoil or make compensating arrangements with the landowner to perform such work. This request by the landowner must be made during the pre-construction interview in order to be co-ordinated with the construction process. After cultivation, the Company will pick stones again. If requested by the landowner, the Company will return in the year following construction and chisel plough or cultivate to the depth of the topsoil. When necessary to accommodate planting schedules, the landowners should perform cultivating and/or chisel ploughing themselves at the Company's expense, provided the need for this work has been agreed upon in advance (see Schedule of Rates attached).</p> <p>6.5 STONEPICKING The Company shall, at a time satisfactory to the landowner, pick stones 50 m m (2") or larger in diameter by hand/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones 5 0 m m (2") or larger in the following years where there is a demonstrable need.</p>	<p>with an implement(s) as agreed by the Company and Landowners.</p> <p>After cultivation, the Company will pick stones again.</p> <p>The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.</p> <p>If agreed to by the parties, the Company will return in the year following construction and will cultivate the easement area. When necessary, to accommodate planting schedules, the Landowner should perform cultivation themselves, at the Company's expense (see Schedule of Rates attached as Schedule 3.</p> <p>The Company shall, at a time satisfactory to the Landowner, return to pick stones 50 mm (2 inches) or larger in diameter by hand/or with a mechanical stone picker in each of first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones 50 mm (2 inches) or larger in the years following where there is a demonstrable need.</p>	<p>an implement(s) as agreed by the Company and Landowners.</p> <p>After cultivation, the Company will pick stones again.</p> <p>The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.</p> <p>If agreed to by the parties, the Company will return in the year following construction and will cultivate, chisel plough and /or deep till the easement area. When necessary, to accommodate planting schedules, the Landowner should perform tillage themselves, at the Company's expense (see Schedule of Rates attached as Schedule 5).</p> <p>For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than 4 inches, by hand/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones in the years following where there is a demonstrable need.</p>	<p>implement(s) as agreed by the Company and Landowners.</p> <p>After cultivation, the Company will pick stones again.</p> <p>The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.</p> <p>If agreed to by the parties, the Company will return in the year following construction and will cultivate, chisel plough and /or deep till the easement area. When necessary, to accommodate planting schedules, the Landowner should perform tillage themselves, at the Company's expense (see Schedule of Rates attached as Schedule 5).</p> <p>For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than 4 inches, by hand/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones in the years following where there is a demonstrable need.</p>

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<p>1.(o) The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance and will be responsible for remedy, in consultation with the landowner, of any drainage problem created by the existence of the pipeline. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the company’s activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the company’s activities, including future maintenance operations and problems caused by the company’s contractors, agents or assigns. Where the landowner, acting reasonably, believes that there may be a drainage problem arising from the company’s operations, the company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the landowner’s satisfaction.</p> <p>All installations may be inspected by the landowner or his/her designate prior to backfilling where practicable. The company will provide the landowner or his/her designate advance notice of the tile repair schedule.</p> <p>The company will retain the services of a qualified independent drainage consultant. The consultant will work with landowners to develop plans and installation methods and, if the plan is implemented, the consultant will certify that the construction accords with the plan. If prior to construction the company is provided with these plans prepared by the drainage consultant and approved in writing by the landowner, the</p>	<p>10. Drainage Tiling The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company’s activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company’s activities, including future maintenance operations and problems caused by the Company’s contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company’s operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner’s satisfaction.</p> <p>The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior to, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or temporary</p>	<p>10. Drainage Tiling The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will consider reasonable requests by the Landowner to construct additional tile runs near damaged lands. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company’s activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company’s activities, including future maintenance operations and problems caused by the Company’s contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company’s operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner’s satisfaction.</p> <p>The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior to, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or temporary tile construction</p>	<p>10. Drainage Tiling The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will consider reasonable requests by the Landowner to construct additional tile runs near damaged lands. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company’s activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company’s activities, including future maintenance operations and problems caused by the Company’s contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company’s operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner’s satisfaction.</p> <p>The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior to, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or temporary tile construction required on their land. The Consultant</p>

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<p>company will install tile along the pipeline in the following situations:</p> <ol style="list-style-type: none"> In areas of numerous random tiles or systematic tiles that cross the pipeline easement, the Company will install header tiles (interceptor drains) adjacent to the easement as laid out in the plans. The downstream end of cut tile will be plugged. Such work will occur as soon as practicable, but prior to topsoil stripping operations. Any intercepted drains will be connected or plugged. The company will attempt to minimize the number of tile crossing the pipeline easement. In areas where drainage problems will be created as a result of the easement, the drainage consultant will develop a tile plan to mitigate these impacts provided that the landowner is agreeable to any works required for this installation. Should the pipeline construction program clear lands adjacent to existing pipelines and as a result create a newly cleared area large enough to farm, the company will, at the request of the landowner, develop a tile plan to drain the said area. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the said tile plan provided the cost of such work does not exceed the present value of the net crop revenue from the said area. The present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the landowner releases the Company from all future operation and maintenance 	<p>tile construction required on their land. The Consultant will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of five licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.</p> <p>Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre- construction tiling plans where required. The purpose of pre- construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or</p>	<p>required on their land. The Consultant will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.</p> <p>Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre-construction tiling plans where required. The purpose of pre-construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement and temporary land use limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or greater</p>	<p>will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.</p> <p>Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre-construction tiling plans where required. The purpose of pre-construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement and temporary land use limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or greater crossing the easement. The Company will ensure that any</p>

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<p>responsibilities for said pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the landowner obtains necessary easements or releases fully authorizing said crossings.</p> <p>4. Drainage laterals will be installed after construction of the pipeline to provide easement drainage. Lateral and cross- easement tiles will be installed in the construction year as weather permits.</p> <p>5. Other areas recommended by the drainage consultant.</p> <p>If random tiles are encountered during construction they will be staked and capped, unless temporary piping is installed to maintain flow.</p> <p>The Company will do the following to accommodate planned and future drainage systems in the Company’s drainage and pipeline design. The Company will incorporate any professionally designed drainage plans obtained by the landowner for future installation. If the landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Company will hire a drainage consultant to develop an Easement Crossing Drainage Plan in consultation with the landowner.</p> <p>In areas where topsoil has been stripped, and at the request of the landowner, the company will complete post-construction tile installation and repairs prior to topsoil replacement.</p> <p>The installation of tile shall be performed by a licensed drainage contractor. The company will consult with the landowner committee and mutually develop a list of acceptable tile drainage contractors to be used during</p>	<p>greater crossing the easement. The Company will ensure that any such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.</p> <p>During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan and profile for each affected owner. These post construction tile plans will show the Landowner exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.</p> <p>During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.</p> <p>The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.</p> <p>Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:</p>	<p>crossing the easement. The Company will ensure that any such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.</p> <p>During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan and profile for each affected owner. These post construction tile plans will show the Landowner exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.</p> <p>During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.</p> <p>The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.</p> <p>Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:</p>	<p>such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.</p> <p>During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan and profile for each affected owner. These post construction tile plans will show the Landowner exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.</p> <p>During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.</p> <p>The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.</p> <p>Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:</p>

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<p>construction. Header tiles will be installed using a trench method to ensure that all field tile are located and connected as required by the tile plan.</p> <p>The company will provide the landowner with the most recent specifications concerning tile support systems for existing tile across the trench. The method of support will be agreed upon between the landowner and the company's drainage consultant during the pre-construction visit.</p>	<p>i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.</p> <p>ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.</p>	<p>i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, or stone pit drain with pea gravel, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.</p> <p>ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will consider adding two drains between pipelines where necessary. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.</p>	<p>i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, or stone pit drain with pea gravel, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.</p> <p>ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will consider adding two drains between pipelines where necessary. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.</p>

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<p>The company will provide the landowner with a copy of as-built drainage plans.</p>	<p>The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.</p> <p>In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.</p> <p>Once the tiling is complete the Consultant will adjust all tile plans to reflect the as- constructed information and a copy will be provided to the Landowner for their records.</p>	<p>The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.</p> <p>In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.</p> <p>Once the tiling is complete the Consultant will adjust all tile plans to reflect the as-constructed information and a copy will be provided to the Landowner for their records.</p>	<p>The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.</p> <p>In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.</p> <p>Once the tiling is complete the Consultant will adjust all tile plans to reflect the as-constructed information and a copy will be provided to the Landowner for their records.</p>
<p>(p) Company will, unless otherwise agreed to with the landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the landowner with a proposed temporary tiling plan for review. If the Company pumps into an existing tile with the landowner's permission, the water will be filtered.</p>	<p>11. Water Accumulation during Construction The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.</p>	<p>11. Water Accumulation during Construction The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.</p>	<p>11. Water Accumulation during Construction The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.</p>
<p>(u) Where requested by the landowner, the Company will leave plugs for access across the trench to the remainder of the landowner's property during construction. Following construction, the Company shall ensure that the landowner shall have access across the former trench area</p>	<p>12. Access Across the Trench Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from</p>	<p>12. Access Across the Trench Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from crossing the trench line with farm equipment,</p>	<p>12. Access Across the Trench Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from crossing the trench line with farm equipment, the Company will improve crossing</p>

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<p>and easement. Upon request of the landowner, the Company shall create a gravel base on filter fabric across the plug(s) and will remove same at the further request of the landowner.</p>	<p>crossing the trench line with farm equipment, the Company will improve crossing conditions either by further replacement and/or compaction of subsoil at the previous plug locations. Should conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.</p>	<p>the Company will improve crossing conditions either by further replacement and/or compaction of subsoil at the previous plug locations. Should conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.</p> <p>Following construction, the Company shall ensure that the landowner shall have access across the former trench area and easement.</p>	<p>conditions either by further replacement and/or compaction of subsoil at the previous plug locations. Should conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.</p> <p>Following construction, the Company shall ensure that the landowner shall have access across the former trench area and easement.</p>
	<p>13. Restoration of Woodlots If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Union will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.</p>	<p>13. Restoration of Woodlots If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Union will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.</p>	<p>13. Restoration of Woodlots If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Enbridge Gas Inc. will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.</p>
<p>At the choice of the landowner, the easement can be replanted with trees provided no planting takes place within a 6 metre strip centred over the pipeline. Landowners are reminded that the company must be notified five days prior to any excavation taking place on the easement and that such excavation must be under the direction of a Company inspector, in accordance with the easement agreement.</p>	<p>14. Tree Replacement The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.</p> <p>For windbreaks/hedgerows the Company will implement the following practice:</p>	<p>14. Tree Replacement The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.</p> <p>For windbreaks/hedgerows the Company will implement the following practice:</p>	<p>14. Tree Replacement The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.</p> <p>For windbreaks/hedgerows the Company will implement the following practice:</p>

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	<p>i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.</p> <p>ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.</p> <p>The Company will warrant such trees for a period of one year following planting, provided the Landowner waters the trees as appropriate after planting.</p>	<p>i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.</p> <p>ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.</p> <p>The Company will warrant such trees for a period of three years following planting, provided the Landowner waters the trees as appropriate after planting.</p>	<p>i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.</p> <p>ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.</p> <p>The Company will warrant such trees for a period of three years following planting, provided the Landowner waters the trees as appropriate after planting.</p>
<p>1.(c) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre- construction grade as reasonably practicable.</p> <p>1.(d) The company will ensure all construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.</p> <p>1.(e) Whenever possible, all vehicles and equipment will travel on the trench line.</p> <p>1.(n) All subsoils from road bores will be removed.</p> <p>1.(q)The Company shall replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner. In addition, the Company will reset any survey monuments which are removed or destroyed during pipeline construction.</p>	<p>15. Covenants Company covenants as follows:</p> <p>i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre- construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.</p> <p>ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.</p> <p>iii) Whenever possible, all vehicles and equipment will travel on the trench line.</p> <p>iv) All subsoil from road bores will be removed.</p> <p>v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.</p> <p>vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.</p>	<p>15. Covenants Company covenants as follows:</p> <p>i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.</p> <p>ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.</p> <p>iii) Whenever possible, all vehicles and equipment will travel on the trench line.</p> <p>iv) All subsoil from road bores will be removed.</p> <p>v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.</p> <p>vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.</p>	<p>15. Covenants Company covenants as follows:</p> <p>i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.</p> <p>ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.</p> <p>iii) Whenever possible, all vehicles and equipment will travel on the trench line.</p> <p>iv) All subsoil from road bores will be removed.</p> <p>v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.</p> <p>vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.</p>

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<p>1.(v) The Company, including its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into Municipal Drains to provide access to the easement.</p> <p>Further, the Company will not use any laneway or culvert of the landowner without the landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the landowner accordingly.</p> <p>The Company agrees to monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p> <p>1.(w) The Company agrees that construction activities will not occur over the off-easement areas without the written permission of the landowner. The Company agrees that it will pay for damages caused by construction/ operations activities in the event that such off easement damages occur.</p> <p>1.(x) The Company's Landowner Complaint Tracking system shall be available to landowners for the proposed construction.</p> <p>1.(cc) The Company will provide a copy of this Letter of Understanding and the environmental reports to the construction contractor.</p> <p>1.(ee) The Company will ensure suitable passage and land access for agricultural equipment during construction.</p> <p>1.(z) The Company will import 3 inches of topsoil to remedy any areas affected by construction that have crop losses in excess of 50 % in the fifth year following construction to be distributed in accordance with the following protocol</p>	<p>vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.</p> <p>viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.</p> <p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p> <p>x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages</p> <p>xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.</p> <p>xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.</p> <p>xiii) To ensure suitable passage and land access for agricultural equipment during construction.</p> <p>xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription to rectify the problem..</p>	<p>vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.</p> <p>viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.</p> <p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p> <p>x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages.</p> <p>xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.</p> <p>xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.</p> <p>xiii) To ensure suitable passage and land access for agricultural equipment during construction.</p> <p>xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop</p>	<p>vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.</p> <p>viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.</p> <p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p> <p>x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages.</p> <p>xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.</p> <p>xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.</p> <p>xiii) To ensure suitable passage and land access for agricultural equipment during construction.</p> <p>xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription</p>

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<p>regardless of the cause of the loss and without prejudice to the landowner's continuing right to compensation for losses in excess of those compensated for.</p> <p>(i) The Company will regrade the total width of the easement, including the designated area to level any ruts;</p> <p>(ii) The Company will import a quantity of topsoil equivalent to three (3) inches times the total area of the Land experiencing greater than 50% crop loss (the "affected area"). The topsoil will be of a quality described in subsection (bb), dry and tested for the presence of soybeans cyst nematode;</p> <p>The Company will spread the imported topsoil uniformly over the affected</p> <p>1.(l) At the request of the landowner, the Company agrees to retain an independent consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoils and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil.</p>	<p>xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.</p> <p>xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil.</p>	<p>a prescription to rectify the problem, which will be implemented at the cost of the Company.</p> <p>xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.</p> <p>xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil. The Company will provide the results of the testing to the Landowner</p>	<p>to rectify the problem, which will be implemented at the cost of the Company.</p> <p>xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.</p> <p>xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil. The Company will provide the results of the testing to the Landowner.</p>

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<p>6.1 The Company will work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.</p> <p>6.2 DAMAGES FROM PIPELINE OPERATIONS Prior to scheduled excavation for maintenance work, top soil shall be stripped and piled separately from subsoil. Pipeline maintenance shall be scheduled to accommodate crop planting, growing and harvesting, however, in the event maintenance work results in crop damage, Union shall negotiate crop damage settlements. Any work on existing pipelines will be carried out using current practices.</p> <p>The Integrity Dig Agreement shall apply to all integrity and maintenance operations on the whole Dawn-Trafalgar system.</p> <p>6.4 DEPTH OF COVER At the request of the landowner, the Company shall undertake a depth of cover survey of the Pipeline, and shall provide its findings to the landowner. Where it is determined that cover over the Pipeline is less than three feet, The Company shall restore depth of cover to three feet with the importation of topsoil or by lowering the pipe.</p> <p>1.(bb) Any imported topsoil shall be natural, cultivated, medium loam, neither clay or sandy in nature, capable of heavy agricultural growths and be from a source approved by the landowner.</p>	<p>xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.</p> <p>xviii) To implement the Company’s Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.</p> <p>xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined that cover over the pipeline is less than 0.9 metres the Company shall restore depth of cover to a minimum of 0.9 metres with the importation of topsoil or by lowering the pipe. In areas where the top of the pipe is at or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.</p> <p>xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company’s Consultant and be from a source approved by the landowner.</p>	<p>xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.</p> <p>xviii) To implement the Union Gas Limited - GAPLO Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.</p> <p>xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined the cover over the pipeline is less than 0.9 metres, the Company shall, unless the Landowner agrees otherwise, restore depth of cover to a minimum of 0.9 meters with the importation of topsoil or by lowering the pipeline. In areas where the top of the pipe is at or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.</p> <p>xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company’s Consultant and be from a source approved by the landowner.</p>	<p>xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.</p> <p>xviii) To implement the Integrity Dig Agreement in the form attached hereto as Schedule 8 for all integrity and maintenance operations on the pipeline.</p> <p>xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined the cover over the pipeline is less than 0.9 metres, the Company shall, unless the Landowner agrees otherwise, restore depth of cover to a minimum of 0.9 meters with the importation of topsoil or by lowering the pipeline. In areas where the top of the pipe is at or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.</p> <p>xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company’s Consultant and be from a source approved by the landowner.</p>

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<p>1.(f) The Company will not open more than 6.0 km. of trench line at a time.</p> <p>1.(dd) The Company agrees to implement one joint committee for the NPS 48 Strathroy-Lobo Project under the terms of reference agreed to in Schedule 1 hereof.</p> <p>1.(s) The landowner will execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in Paragraph 1, (h) through (q). It is suggested that any tenant(s) who are affected by construction accompany the landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment. The Landowner Committee will be provided, for review, the form of documents required for landowner execution.</p>	<p>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p> <p>Landowner covenants as follows:</p> <p>i) To execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction accompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.</p>	<p>xxi) To implement Union’s wet soil shut down practice as described in Schedule 6.</p> <p>xxii) The Company will not open more than 6.0 continuous kilometers of open trench per construction spread at a time.</p> <p>xxiii) The Company shall consult with the Landowner and/or Landowner’s agent(s) with respect to the existing farm biosecurity protocols and requirements in effect on the Lands (including those protocols and requirements designed to prevent the transmission of pests and diseases and those designed to preserve the integrity of organic or specialty agriculture production). Whenever present on the Lands, the Company will conduct activities in a manner that respects existing farm biosecurity protocols and requirements in effect.</p> <p>xxiv) The Company agrees to implement one joint committee for the project under the terms of reference set out in article 31 hereof.</p> <p>xxv) The Company shall consult with the Landowner prior to any removal of an object from in or on the Temporary Land Use area pursuant to the Temporary Land Use Agreement.</p> <p>Landowner covenants as follows:</p> <p>i) To execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction accompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.</p>	<p>xxi) To implement Enbridge Gas Inc.’s wet soil shut down practice as described in Schedule 6.</p> <p>xxii) The Company will not open more than 6.0 continuous kilometers of open trench per construction spread at a time.</p> <p>xxiii) The Company shall consult with the Landowner and/or Landowner’s agent(s) with respect to the existing farm biosecurity protocols and requirements in effect on the Lands (including those protocols and requirements designed to prevent the transmission of pests and diseases and those designed to preserve the integrity of organic or specialty agriculture production). Whenever present on the Lands, the Company will conduct activities in a manner that respects existing farm biosecurity protocols and requirements in effect.</p> <p>xxiv) The Company agrees to implement one joint committee for the project under the terms of reference set out in article 31 hereof.</p> <p>xxv) The Company shall consult with the Landowner prior to any removal of an object from in or on the Temporary Land Use area pursuant to the Temporary Land Use Agreement.</p> <p>Landowner covenants as follows:</p> <p>i) To execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction accompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.</p>

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<p>5.2 (c) GENERAL MATTERS FOR DAMAGES As damage payments are made directly to the registered landowner, the landowner is responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company.</p> <p>The Landowner(s) in consideration of this settlement, covenants and represents that this settlement and the relevant easement agreement or option for easement, as the case may be will be made known to any occupant, tenant or lessee of their lands.</p>	<p>ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.</p> <p>iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.</p>	<p>ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.</p> <p>iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.</p> <p>iv) To only access the work area when accompanied by the Company's designated representative. The Company will facilitate the Landowner's access to the work area upon request.</p>	<p>ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.</p> <p>iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.</p> <p>iv) To only access the work area when accompanied by the Company's designated representative. The Company will facilitate the Landowner's access to the work area upon request.</p>
<p>(y) The Company shall pay the costs of independent consultants satisfactory to both the landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:</p> <p>(i) The need for topsoil importation as in Clauses 1 i) hereof, respecting the existence of identifiable subsidence,</p> <p>(ii) The need for topsoil importation as in Clause 1 (z) hereof, respecting the establishment of crop losses in excess of 50%,</p> <p>(iii) The establishment of levels of compensation for specialty crops as in clause 5.2 hereof.</p> <p>(iv) resolution of future crop loss claims under s.5.2 (a) hereof.</p> <p>In addition, in the event that a dispute arises between a landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to Para. 1(d)(d) and Schedule 1 hereof,</p>	<p>16. Dispute Resolution In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:</p> <p>i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,</p> <p>ii) The establishment of levels of compensation for specialty crops as in Article 21.</p> <p>iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.</p>	<p>16. Dispute Resolution In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:</p> <p>i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,</p> <p>ii) The establishment of levels of compensation for specialty crops as in Article 21.</p> <p>iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.</p> <p>In addition, in the event that a dispute arises between the Landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to article 31 the Company may retain a</p>	<p>16. Dispute Resolution In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:</p> <p>i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,</p> <p>ii) The establishment of levels of compensation for specialty crops as in Article 21.</p> <p>iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.</p> <p>In addition, in the event that a dispute arises between the Landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to article 31 the Company may retain a mutually satisfactory</p>

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<p>the Company may retain a mutually satisfactory independent consultant to assist in the resolution of the particular dispute.</p> <p>5.2(c) Where damage settlements cannot be negotiated, the Company or the landowner may apply to the Board of Negotiation or Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the landowner's executing our easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline and the aforementioned settlement arrangements will be in full effect.</p>	<p>Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.</p>	<p>mutually satisfactory independent consultant to assist in the resolution of the particular dispute.</p> <p>Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.</p>	<p>independent consultant to assist in the resolution of the particular dispute.</p> <p>Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Land Tribunal to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.</p>
<p>4. LAND RIGHTS Land rights required for the pipeline construction include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender any of its permanent rights or be released from any of its obligations in the easement lands unless an agreement to the contrary has been made with the landowner. In making payment for land rights directly to the registered owner of the affected lands, the owner is responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.</p> <p>Consideration for land rights will be based on appraised market value of the affected lands. In determining the appraised market value, independent accredited real estate appraisers are retained by the Company who must observe the standards established by the Appraisal Institute of Canada. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is</p>	<p>17. Land Rights - Easements Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.</p> <p>Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be</p>	<p>17. Land Rights - Easements Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.</p> <p>Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be agreed</p>	<p>17. Land Rights - Easements Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.</p> <p>Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at</p>

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<p>chosen by the landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at a compensation hearing and the Company's offers would not prejudice either parties' presentation at the hearing.</p> <p>4.1 EASEMENTS Pipeline easements convey a limited right in an owner's land for the construction, operation, maintenance and repair of a pipeline. The owner retains title to the right-of-way lands with a restricted right to use the easement. The Company will pay a consideration for easements based upon 100% of the appraised market value of the lands required which includes a premium as an incentive for settlement. Payments for easements will be made in one lump-sum or will be amortized over 10 years using the current Canada Savings Bond (CSB) rate, at the option of the landowner.</p>	<p>agreed upon, the matter would be determined at a Ontario Municipal Board Compensation Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.</p>	<p>upon, the matter would be determined at an Ontario Municipal Board Compensation Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.</p>	<p>an Ontario Land Tribunal Compensation Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.</p>
<p>4.2 TEMPORARY LAND USE AGREEMENTS Consideration is also paid for temporary use of landowners' property required in connection with the project. This lump sum payment for use of these lands is based upon 50% of the appraised market value for agricultural lands. Payment for Disturbance damages will also be made on the basis of 50 percent of the values described in 5.1 below and Appendix "A" hereto. The Comparative Crop Option and One Time Payment with Cover Crop Option 5.2 below is available for temporary land use lands in agricultural areas. For non-agricultural or development lands, an annual payment is offered based on the market value multiplied by the current CSB rate. Temporary land use will be required for at least a two year period, being</p>	<p>18. Land Rights – Temporary Land Use Agreements and Top Soil Storage These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.</p>	<p>18. Land Rights – Temporary Land Use Agreements and Top Soil Storage These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.</p>	<p>18. Land Rights – Temporary Land Use Agreements and Top Soil Storage These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.</p>

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<p>the year of construction and the following year to allow for cleanup and restoration activities. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify temporary land use areas required, in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above. Temporary land use payments do not include those lands used for top soil storage adjacent to the right-of-way which is compensated on the following basis: (a) minimum area equivalent to 36% of the easement area (payable before construction): (i) 50% of appraised market value for agricultural land (ii) disturbance damages (as a component of easement disturbance damages as described in s.5.1 and Appendix “A” hereto) (iii) crop loss (100% damages for crop destroyed during construction and future loss “as incurred” in accordance with s.5.2(a) and Appendix “A” hereto) (b) additional topsoil storage in excess of 36% of easement area (payable after construction): (i) (as above) (ii) actual area of topsoil storage x 50% of appraised market value of agricultural land minus disturbance payment for topsoil storage paid in easement disturbance prior to construction (iii) (as above).</p>			
<p>5. DAMAGE PAYMENTS Compensation for damages can be grouped under two headings, namely, Disturbance Damages, which are paid at the time easements and temporary land use agreements are executed, and</p>	<p>19. Damage Payments Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements and temporary land use agreements are executed, and</p>	<p>19. Damage Payments Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements, and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is</p>	<p>19. Damage Payments Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements, and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is completed. Top soil storage damages</p>

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<p>Construction Damages, which are paid either before or after construction is completed. Disturbance and Construction damage payments will apply to both easement and temporary land use and will be based upon the areas of the proposed pipeline easement and temporary land use.</p>	<p>Construction Damages, which are paid either before or after construction is completed. Top soil storage damages will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.</p>	<p>completed. Top soil storage damages will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.</p>	<p>will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.</p>
<p>5.1 DISTURBANCE DAMAGES</p> <p>Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access, extra applications of fertilizer, temporary storage of top soil off easement.</p> <p>Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected owner to address these site-specific issues.</p>	<p>20. Disturbance Damages</p> <p>Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer.</p> <p>Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected Landowner to address these site-specific issues.</p>	<p>20. Disturbance Damages</p> <p>Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer.</p> <p>Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected Landowner to address these site-specific issues.</p>	<p>20. Disturbance Damages</p> <p>Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer.</p> <p>Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Enbridge Gas Inc. will negotiate with the affected Landowner to address these site-specific issues.</p>
<p>5.2 CONSTRUCTION DAMAGES (a) CROP DAMAGE</p> <p>There are two options available to landowners for compensation of crop damage. A Comparative Crop Program, or a One Time Payment program with a Cover Crop Option. These are described below. OPTION ONE: Comparative Crop Program</p>	<p>21. Construction Damages – Crop Loss</p> <p>The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:</p> <ul style="list-style-type: none"> i) year of construction and future crop loss; ii) stone picking beyond the second year following construction; iii) crop losses associated with establishment of a cover crop. 	<p>21. Construction Damages – Crop Loss</p> <p>The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:</p> <ul style="list-style-type: none"> i) year of construction and future crop loss; ii) stone picking beyond the second year following construction; 	<p>21. Construction Damages – Crop Loss</p> <p>The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:</p> <ul style="list-style-type: none"> i) year of construction and future crop loss; ii) stone picking beyond the second year following construction;

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<p>In the "Comparative Crop Program" the Company will monitor crop yields on and off right-of-way to compensate for any reduction in yield which is attributable to the pipeline construction and any related effects (i.e. thermal effect) and will follow a damage claim settlement program as follows: First Year (Construction Year) - Pay 100% of crop damage on all permanent and temporary easements, topsoil storage areas, gored areas and adjoining affected lands. Second to Fifth Year - The crop loss compensated applies only to easements and temporary land use areas. It will be based on results obtained from a consulting agronomist retained by the Company; any other testing must be approved by the Company . The agronomist will determine any difference in crop yields on and off the easement/temporary land use areas (percent crop loss) and the Company will compensate for such crop losses at prevailing rates. Sixth Year - In the sixth year, at the landowner's discretion in consultation with the Company, the "Comparative Crop Program" may remain in effect, or the landowner may offer to accept a lump sum payment from the Company, and the landowner will sign a Full and Final Release. The lump sum payment will be the sixth year percent crop loss plus net present value of future years' losses. Net present value of future years' losses will be based on the percent crop loss in the sixth year multiplied by the average price per acre on crops grown in the prior six (6) year period divided by the current CSB rate. For example: Present Value = Payment/Interest</p>	<p>Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the " One Time " program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.</p> <p>Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:</p>	<p>iii) Crop losses associated with establishment of a cover crop.</p> <p>Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the " One Time " program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.</p> <p>Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:</p>	<p>iii) Crop losses associated with establishment of a cover crop.</p> <p>Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the " One Time " program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.</p> <p>Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:</p> <p>i) Third year crop loss under "One Time" Program = 50%.</p>

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<p>Thus, Lump Sum = (Sixth Year % Crop Loss) + (% Crop Loss x Average Crop Price Per Acre x Acreage) / CSB Rate Example: 20% crop loss over 1 acre area; average crop price \$300/acre $(.20 \times \\$300.00 \times 1.0) + .20 \times \\$300.00 \times 1.0 = \\$631.43$ (Lump Sum Payment) / .105</p> <p>It is understood and agreed that landowners will use good farming practices in the cultivation of their lands to mitigate any ensuing damages to the best of their ability. The Company will provide crop restoration recommendations following the completion of construction to assist landowners in rehabilitating the affected lands and will compensate them for any expenses over and above normal farm management of the easement while carrying out these recommendations. Where a landowner has followed these recommendations to the best of their ability, and is still participating in the "Comparative Crop Program " the Company will, at its expense, retain agricultural specialists to offer advice and assistance in restoration procedures. If the landowner chooses the Comparative Crop Program, the Company will also monitor and compensate for any decrease in the price obtained for the whole field crop as a result of differences in grade, quality, condition or moisture content between the crop on the whole Dawn-Trafalgar right-of-way and the crop off right-of-way but this provision shall not apply if the One Time Payment Program is chosen. Pasture Lands - If the affected lands are being used for pasture, the landowner may wish to select the following option in lieu of the 5 year crop monitoring described above. Any unbroken pasture area involved will be reseeded by the Company or on mutual agreement, by the landowner who will be compensated for the reseeded. Pasture area will be paid at 100%</p>	<p>i) Third year crop loss under "One Time" Program = 50%. ii) Actual crop loss following investigation and sampling = 60%. iii) Difference payable to Landowner = 10%.</p> <p>Crop Loss for topsoil storage Areas Compensation for crop loss on topsoil storage areas will be as follows: <input type="checkbox"/> In year of construction - 100% crop loss; <input type="checkbox"/> In years after construction - measured crop loss; <input type="checkbox"/> Payments will be based upon actual area used for topsoil storage; <input type="checkbox"/> Compensation will not be prepaid; <input type="checkbox"/> Compensation will be paid on an as incurred basis.</p> <p>Speciality Crops The one time payment does not apply to specialty crops. Specialty crops include tobacco, produce and registered seeds. Compensation will be negotiated on a site specific basis.</p> <p>Post construction cover crop program In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and</p>	<p>i) Third year crop loss under "One Time" Program = 50%. ii) Actual crop loss following investigation and sampling = 60%. iii) Difference payable to Landowner = 10%.</p> <p>Crop Loss for topsoil storage Areas Compensation for crop loss on topsoil storage areas will be as follows: <ul style="list-style-type: none"> • In year of construction - 100% crop loss; • In years after construction - measured crop loss; • Payments will be based upon actual area used for topsoil storage; • Compensation will not be prepaid; • Compensation will be paid on an as incurred basis. <p>Speciality Crops The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project for specialty crops. Specialty crops include tobacco, produce (eg. carrots, peas, lentils) sugar beets and registered seeds. In the event the Landowner does not want to accept the one-time settlement compensation will be negotiated on a site specific basis.</p> <p>Post construction cover crop program In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and Food. The cost of seed planted over the easement will</p> </p>	<p>ii) Actual crop loss following investigation and sampling = 60%. iii) Difference payable to Landowner = 10%.</p> <p>Crop Loss for topsoil storage Areas Compensation for crop loss on topsoil storage areas will be as follows: <ul style="list-style-type: none"> • In year of construction - 100% crop loss; • In years after construction - measured crop loss; • Payments will be based upon actual area used for topsoil storage; • Compensation will not be prepaid; • Compensation will be paid on an as incurred basis. <p>Speciality Crops The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project for specialty crops. Specialty crops include tobacco, produce (eg. carrots, peas, lentils) sugar beets and registered seeds. In the event the Landowner does not want to accept the one-time settlement compensation will be negotiated on a site specific basis.</p> <p>Post construction cover crop program In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by OMAFRA (or such replacement publication as may be issued by OMAFRA). The cost of seed planted over the easement will be compensated upon presentation</p> </p>

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<p>loss for a two year term, being the construction year and the year following construction to allow the affected area to establish growth. At the end of the two year period, if the pasture has been established, a Full and Final release will be requested from the landowner. If the pasture has not yet been established, compensation will continue to be paid at 100% loss until such time as the pasture has been established, at which time a Full and Final Release will be signed by the landowner.</p> <p>OPTION TWO: One Time Payment With Cover Crop Option As an alternative to the foregoing damage programmes, the Company will offer landowners a one-time settlement on the area of the permanent easement and temporary land use areas, for a Full and Final Release on future crop loss, trees, stone picking beyond the year following construction, cover crops, inspection, consulting time and general damages of any nature whatsoever. Payment is normally made after construction but can be made at the time easement agreements are executed. Notwithstanding that the landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program in any year following construction and the landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the landowner for the difference calculated by applying the percentage loss to the landowner's actual gross return in the year and deducting the compensation received for that year under the "One Time" program. It will be incumbent upon any landowner making this type of claim to advise the company in sufficient time to allow for</p>	<p>Food. The cost of seed planted over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.</p>	<p>be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.</p>	<p>of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.</p>

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<p>investigation of the matter and completion of the required samplings. Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable "top up ", provided that the Company is not responsible for installing GPS units or survey equipment if necessary. In the event that the landowner selects this option, the landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. Example Third year crop loss under "One Time" Program = 50%. Actual crop loss following investigation and sampling = 60%. Difference payable to landowner - 10%).</p> <p>For any land used outside the permanent easement, the Company will pay 100% damages for any crops destroyed during the construction year and pay damages for future crop loss on an "as incurred" basis. This option does not apply to specialty crops. Damages to specialty crops, i.e. tobacco, produce, registered seed variety, will be reviewed and compensation negotiated on a site specific basis and paid on a yearly basis as a specialty crop rotation. In addition to the one time payment, the landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and Food. The cost of seed planted</p>			

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over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco crops.			
<p>5.2 (b) WOODLOTS AND HEDGEROW TREES</p> <p>All woodlots and hedgerow trees to be cut will be appraised by a qualified forester retained by the Company. The forester will contact the landowner before entry on their property. Copies of appraisal reports will be made available to affected landowners and payment will be made in accordance with the reports.</p> <p>If requested by the landowner, evaluation of trees in woodlots will be based on the accepted practice as outlined on Schedule 1 hereto. The evaluation of trees for aesthetic values, will be carried out by qualified professionals according to standard principles as outlined in Schedule 2 hereto. Compensation for trees evaluated in this manner shall be set out in Appendix "B" to this document.</p> <p>Union reserves the right to use trees for which it has paid compensation. At the landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.</p> <p>As an alternative to the forester's appraisal, the landowner may accept "Option Two: One Time Payment" (see page 13) in lieu of the woodlot evaluation.</p> <p>Tree plantations (Christmas trees and nursery stock) will be appraised separately. Prior to the start of construction, the following options will be discussed with the landowner, and the most appropriate option selected: Option 1: The land will be completely cleared for construction with all stumps and brush removed so that the land can be cultivated. Option 2: At Union's expense, all vegetation on the construction area will be cut with brush cutters or sprayed regularly so that brush or trees will not grow again.</p>	<p>22. Woodlots and Windbreak/Hedgerow Trees</p> <p>With respect to compensation for damage to woodlots, the Landowner will have the following two options:</p> <p>Option 1: Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.</p> <p>Option 2: The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.</p> <p>With respect to compensation for damage to other wooded areas:</p> <p>Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.</p> <p>Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.</p> <p>The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected</p>	<p>22. Woodlots and Windbreak/Hedgerow Trees</p> <p>The Company will assess the woodlot or hedgerow area(s) to be affected by the Project and will provide a report to the Landowner identifying the trees that will be affected.</p> <p>With respect to compensation for damage to woodlots, the Landowner will have the following two options:</p> <p>Option 1: Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company and satisfactory to the Landowner, acting reasonably. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.</p> <p>Option 2: The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.</p> <p>With respect to compensation for damage to other wooded areas:</p> <p>Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.</p> <p>Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.</p> <p>The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected</p>	<p>22. Woodlots and Windbreak/Hedgerow Trees</p> <p>The Company will assess the woodlot or hedgerow area(s) to be affected by the Project and will provide a report to the Landowner identifying the trees that will be affected.</p> <p>With respect to compensation for damage to woodlots, the Landowner will have the following two options:</p> <p>Option 1: Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company and satisfactory to the Landowner, acting reasonably. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.</p> <p>Option 2: The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.</p> <p>With respect to compensation for damage to other wooded areas:</p> <p>Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.</p> <p>Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.</p> <p>The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected Landowners and payment will be made in accordance with the reports.</p>

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<p>Option 3: Union will maintain a 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the landowner.</p> <p>The Company has established a policy to replant twice the area of trees to those which are cleared for pipeline projects. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this programme. Tree seedlings will be replanted on the right-of-way or within the landowner's property using species determined in consultation with the landowner. Replanting must be done in accordance with the Company's policies regarding tree planting on easements so that a 6 metre strip centred on the pipeline is left open for access to the pipeline.</p>	<p>Landowners and payment will be made in accordance with the reports.</p> <p>The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.</p>	<p>Landowners and payment will be made in accordance with the reports.</p> <p>The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.</p>	<p>The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.</p>
<p>7. GORED LAND</p> <p>The Company agrees to pay landowners the 100 % annual crop loss component as provided in the One Time Payment with Cover Crop Option hereof, or in the case of specialty crops as provided in Clause 5.2 hereof for agricultural lands rendered not useable as a result of the construction of the pipeline and clean-up following construction.</p>	<p>23. Gored Land</p> <p>The Company agrees to pay the Landowner 100 % crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project.</p>	<p>23. Gored Land</p> <p>The Company agrees to pay the Landowner 100% crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project. At the Landowner's request, the Company will plant a cover crop on gored land.</p>	<p>23. Gored Land</p> <p>The Company agrees to pay the Landowner 100% crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project. At the Landowner's request, the Company will plant a cover crop on gored land.</p>
<p>10. INSURANCE</p> <p>Upon request by the landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.</p>	<p>24. Insurance</p> <p>Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.</p>	<p>24. Insurance</p> <p>Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.</p>	<p>24. Insurance</p> <p>Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage per occurrence.</p>

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<p>6.3 ABANDONMENT Upon the abandonment of the pipeline (as determined by the Easement) , the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline was installed, provided that there shall be no additional compensation for crop loss to the landowner under the Comparative Crop Program 5.2 (a) OPTION ONE or the One-Time Payment with Cover Crop OPTION TWO but without prejudice to any continuing right of the landowner to “top up ” compensation pursuant to the provisions of Section 5.2 (a) hereof. The Company, in consultation with the landowner or third parties as required, will determine a reasonable and appropriate course of action to rectify any deficiencies.</p>	<p>25. Abandonment Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner</p>	<p>25. Abandonment Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner.</p>	<p>25. Abandonment Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner</p>
<p>2 LIABILITY The Company will be responsible for damages to property, equipment, and loss of time resulting from construction operations, and will pay for repairs or replacement costs. The Company will be responsible, and indemnify the landowner from any and all liabilities, damages, costs, claims, suits and actions except those resulting from the gross negligence or willful misconduct of the landowner.</p>	<p>24. Liability The Company will be responsible for damages to property, and equipment, resulting from construction operations, and will pay for repairs or replacement costs. The Company will be responsible, and indemnify the Landowner from any and all liabilities, damages, costs, claims, suits and actions except those resulting from the gross negligence or wilful misconduct of the Landowner.</p>	<p>26. Liability The Company shall assume all liability and obligations for any and all loss, damage or injury (including death) to person(s) or property that would not have happened but for the Project and this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Landowner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not liable be to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Landowner.</p>	<p>26. Liability The Company shall assume all liability and obligations for any and all loss, damage or injury (including death) to person(s) or property that would not have happened but for the Project and this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Landowner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not liable be to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Landowner.</p>

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<p>12. ASSIGNMENT All rights and obligations contained in this agreement 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. The Company shall not assign this agreement without prior written notice to the landowner and, despite such assignment, the Company shall remain liable to the landowner for the performance of its responsibilities and obligations in this agreement.</p>	<p>27. Assignment All rights and obligations contained in this agreement 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. The Company shall not assign this agreement without prior written notice to the Landowner and, despite such assignment; the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.</p>	<p>27. Assignment All rights and obligations contained in this agreement shall extend to, be binding upon, and inure 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. The Company shall not assign this agreement without prior written notice to the Landowner and, despite such assignment, the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.</p>	<p>27. Assignment All rights and obligations contained in this agreement shall extend to, be binding upon, and inure 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. The Company shall not assign this agreement without prior written notice to the Landowner and, despite such assignment, the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.</p>
<p>APPENDIX "A": SETTLEMENT Attached as Appendix "B" any other special requirements or compensation issues.</p>	<p>28. Site Specific Issues Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.</p>	<p>28. Site Specific Issues Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.</p>	<p>28. Site Specific Issues Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.</p>
<p>11. COMPENSATION LEVELS The levels of compensation applicable to your property are set out in Appendix "A" and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.</p>	<p>29. Compensation Levels The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.</p>	<p>29. Compensation Levels The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.</p>	<p>29. Compensation Levels The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.</p>
<p>9. INDEPENDENT CONSTRUCTION MONITOR An independent construction monitor shall be appointed by GAPLO-Union (Strathroy-Lobo), the Company and Ontario Energy Board Staff. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to landowners, and shall be available to the landowners and the Company at all times. The monitor shall file interim and final reports with the Ontario Energy Board.</p>	<p><i>GAPLO and Union Gas reached an agreement on the appointment of an Independent Construction Monitor prior to the hearing concerning the Hamilton-Milton Pipeline:</i></p> <p>Union agrees to the appointment of an independent construction monitor for construction on agricultural lands for the Hamilton- Milton pipeline. The construction monitor will be chosen by a committee consisting of one representative from each of</p>	<p>30. Independent Construction Monitor The Company agrees to the appointment of an independent construction monitor for construction on agricultural lands for this project. The construction monitor will be chosen by a committee consisting of one representative from each of Union, the OEB and CAEPLA-PLC. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to the Landowners and the Company at all times.</p>	<p>30. Independent Construction Monitor The Company agrees to the appointment of an independent construction monitor for construction on agricultural lands for this project. The construction monitor will be chosen by a committee consisting of one representative from each of Enbridge Gas Inc., the OEB and CAEPLA-DCLC. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to the Landowners and the Company at all times.</p>

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	<p>Union, the OEB and GAPLO. The scope of work for the construction monitor will be:</p> <ol style="list-style-type: none"> 1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean- up operations was well was wet soil shutdown events; 2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between landowners and Union; 3. To review all specific construction commitments included in Union’s construction contract; 4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and 5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons. <p>Union further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to GAPLO. Union’s agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.</p>	<p>The scope of work for the construction monitor will be:</p> <ol style="list-style-type: none"> 1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations was well was wet soil shutdown events; 2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between Landowners and Union; 3. To review all specific construction commitments included in Union’s construction contract; 4. To respond to specific requests by Landowners and the committee within 24 hours while maintaining limited contact with Landowners on a day-to-day basis; and 5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons. <p>Union further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to CAEPLA-PLC representative. The Company’s agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.</p> <p>The Company shall provide the construction monitor with a schedule of planned construction activities and not less than 24 hours’ notice of any clearing, topsoil stripping, grading, and/or reclamation activities and the construction monitor shall be provided free access, subject to safety requirements, to all construction activities.</p>	<p>The scope of work for the construction monitor will be:</p> <ol style="list-style-type: none"> 1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations was well was wet soil shutdown events; 2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between Landowners and Enbridge Gas Inc.; 3. To review all specific construction commitments included in Enbridge Gas Inc.’s construction contract; 4. To respond to specific requests by Landowners and the committee within 24 hours while maintaining limited contact with Landowners on a day-to-day basis; and 5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons. <p>Enbridge Gas Inc. further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to the CAEPLA-DCLC representative. The Company’s agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.</p> <p>The Company shall provide the construction monitor with a schedule of planned construction activities and not less than 24 hours’ notice of any clearing, topsoil stripping, grading, and/or reclamation activities and the construction monitor shall be provided free access, subject to safety requirements, to all construction activities.</p>

CAEPLA-DCLC LETTER OF UNDERSTANDING COMPARISON CHART – EB-2022-0086

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<p>SCHEDULE 1 Landowner Relations and Terms of Reference of Joint Committee</p> <p>In addition to Wet Soils Shutdown issues, the Joint Committee’s purpose is to:</p> <ul style="list-style-type: none"> i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company; ii) provide a brief overview of issues/concerns raised during and following construction; and, iii) consider which items should be included in a Post Construction Report. The objective of the Joint Committee is to provide: <ul style="list-style-type: none"> i) a vehicle to address issues/concerns which arise during and following construction; ii) deal with any unforeseen circumstances which may arise during or following construction; and, iii) an opportunity for landowners to comment on how Union might improve future construction practices. <p>In reviewing the foregoing, the types of issues which may be addressed are as follows:</p> <ul style="list-style-type: none"> i) landowner concerns that arise during and following construction; ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed; iii) methods of anticipating and avoiding these circumstances in the future; and, iv) review of ongoing construction practices and procedures which in the view of the landowners might be improved in future construction. <p>Duration of the Joint Committee</p> <ul style="list-style-type: none"> i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. The landowners shall be responsible for recruiting 		<p>31. Landowner Relations and Terms of Reference of Joint Committee</p> <p>Committee Make-Up</p> <ul style="list-style-type: none"> i) Members shall be affected Landowners, and appropriate representatives of the Company. <p>The Joint Committee shall be composed of one CAEPLA-PLC Landowner representative, one non-CAEPLA-PLC Landowner representative, and three representatives of the Company. CAEPLA-PLC shall have the right to appoint a primary and an alternate representative.</p> <p>In addition to Wet Soils Shutdown issues, the Joint Committee’s purpose is to:</p> <ul style="list-style-type: none"> i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company; ii) provide a brief overview of issues/concerns raised during and following construction; and, iii) consider which items should be included in a Post Construction Report. <p>The objective of the Joint Committee is to:</p> <ul style="list-style-type: none"> i) to provide a vehicle to address issues/concerns which arise during and following construction; ii) to deal with any unforeseen circumstances which may arise during or following construction; and, iii) to provide an opportunity for landowners to comment on how Union might improve future construction practices. <p>In reviewing the foregoing, the types of issues which may be addressed are as follows:</p> <ul style="list-style-type: none"> i) Landowner concerns that arise during and following construction’; 	<p>31. Landowner Relations and Terms of Reference of Joint Committee</p> <p>Committee Make-Up</p> <ul style="list-style-type: none"> i) Members shall be affected Landowners, and appropriate representatives of the Company. <p>The Joint Committee shall be composed of two CAEPLA-DCLC Landowner representatives and three representatives of the Company. CAEPLA-DCLC shall have the right to appoint an alternate representative.</p> <p>In addition to Wet Soils Shutdown issues, the Joint Committee’s purpose is to:</p> <ul style="list-style-type: none"> i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company; ii) provide a brief overview of issues/concerns raised during and following construction; and, iii) consider which items should be included in a Post Construction Report. <p>The objective of the Joint Committee is to:</p> <ul style="list-style-type: none"> i) to provide a vehicle to address issues/concerns which arise during and following construction; ii) to deal with any unforeseen circumstances which may arise during or following construction; and, iii) to provide an opportunity for landowners to comment on how Enbridge Gas Inc. might improve future construction practices. <p>In reviewing the foregoing, the types of issues which may be addressed are as follows:</p> <ul style="list-style-type: none"> i) Landowner concerns that arise during and following construction;

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<p>the landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.</p> <p>Committee Make-Up</p> <p>i) Members shall be affected landowners, and appropriate representatives of the Company.</p> <p>The Joint Committee shall be composed of one GUSL landowner, one other landowner and three representatives of the Company;</p> <p>Payment to Landowner members</p> <p>i) The Company will pay to the GUSL landowner member of the Joint Committee at his or her direction a total payment of \$ 10,000 plus G.S.T. and the same amount to the other landowner member as an honorarium for their participation on the committee.</p>		<p>ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed;</p> <p>iii) methods of anticipating and avoiding these circumstances in the future; and,</p> <p>iv) review of ongoing construction practices and procedures which might be improved in future construction.</p> <p>Duration of the Joint Committee</p> <p>i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. CAEPLA-PLC shall be responsible for recruiting the CAEPLA-PLC Landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.</p> <p>Payment to Landowner members</p> <p>i) The Company will pay to each Landowner member of the Joint Committee including both CAEPLA-PLC primary and alternate representatives, at his or her direction a total payment of \$15,000 plus H.S.T. as an honorarium for his or her participation on the committee.</p>	<p>ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed;</p> <p>iii) methods of anticipating and avoiding these circumstances in the future; and,</p> <p>iv) review of ongoing construction practices and procedures which might be improved in future construction.</p> <p>Duration of the Joint Committee</p> <p>i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. CAEPLA-DCLC shall be responsible for recruiting the CAEPLA-DCLC Landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.</p> <p>Payment to Landowner members</p> <p>i) The Company will pay to each Landowner member of the Joint Committee including both CAEPLA-DCLC primary and alternate representatives, at his or her direction, a total payment of \$15,000 plus H.S.T. as an honorarium for his or her participation on the committee.</p>
<p>The Integrity Dig Agreement shall apply to all integrity and maintenance operations on the whole Dawn-Trafalgar system.</p>		<p>32. Integrity Dig Agreement The Integrity Dig Agreement will be utilized for all Integrity Digs pertaining to this pipeline and the existing paralleling NPS20 pipeline from Dawn to Dover Station.</p>	<p>32. Integrity Dig Agreement The Integrity Dig Agreement attached hereto as Schedule 8 will be utilized for all integrity and maintenance digs conducted on this pipeline and on any other existing Enbridge Gas Inc. pipelines on the Landowner's property.</p>
<p>APPENDIX "A": SETTLEMENT</p> <p>Attached as Appendix "B" any other special requirements or compensation issues.</p>	<p>SCHEDULE 2: SETTLEMENT</p> <p>Attached as Schedule 2 any other special requirements or compensation issues.</p>	<p>SCHEDULE 2: SITE SPECIFIC ISSUES</p>	<p>SCHEDULE 2: SITE SPECIFIC ISSUES</p>

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<p>SCHEDULE 2 WOODLOT EVALUATION At the time of signing of the Letter of Understanding the landowners with woodlots will be given 3 options.</p> <ol style="list-style-type: none"> 1. take a one time full and final for the total easement. 2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately. 3. take the crop monitoring program and have the woodlot evaluated separately. <p>Woodlots will be assessed in the following manner: A forestry consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management. This volume will then be determined on an annual basis. Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot. This value will then be present valued using the same formula as the one time payment option.</p>	<p>SCHEDULE 3 WOODLOT EVALUATION At the time of signing of the Letter of Understanding the Landowners with woodlots will be given 3 options.</p> <ol style="list-style-type: none"> 1. take a one time full and final for the total easement. 2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately. 3. take the crop monitoring program and have the woodlot evaluated separately. <p>Woodlots will be assessed in the following manner: A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management. This volume will then be determined on an annual basis. Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot. This value will then be present valued using the same formula as the one time payment option.</p>	<p>SCHEDULE 3 WOODLOT EVALUATION At the time of signing of the Letter of Understanding the Landowners with woodlots will be given three options.</p> <ol style="list-style-type: none"> 1. take a one time full and final for the total easement. 2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately. 3. take the crop monitoring program and have the woodlot evaluated separately. <p>Woodlots will be assessed in the following manner: A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management. This volume will then be determined on an annual basis. Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot. This value will then be present valued using the same formula as the one time payment option.</p>	<p>SCHEDULE 3 WOODLOT EVALUATION At the time of signing of the Letter of Understanding the Landowners with woodlots will be given three options.</p> <ol style="list-style-type: none"> 1. take a one time full and final for the total easement. 2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately. 3. take the crop monitoring program and have the woodlot evaluated separately. <p>Woodlots will be assessed in the following manner: A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management. This volume will then be determined on an annual basis. Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot. This value will then be present valued using the same formula as the one time payment option.</p>
<p>SCHEDULE 3 AESTHETIC TREE EVALUATION The following procedure would be followed where a landowner wishes to have trees on his property evaluated for aesthetic values. During discussions for the Letter of Understanding, the landowners would identify the trees he wishes to have evaluated for aesthetic purposes. Union would contract a qualified person to complete an evaluation of the trees. The landowners would be paid the evaluated price for the trees in addition to other payments.</p>	<p>SCHEDULE 4 AESTHETIC TREE EVALUATION The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values. During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes. Union would contract a qualified person to complete an evaluation of the trees. The Landowners would be paid the evaluated price for the trees in addition to other payments.</p>	<p>SCHEDULE 4 AESTHETIC TREE EVALUATION The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values. During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes. Union would contract a qualified person to complete an evaluation of the trees. The Landowners would be paid the evaluated price for the trees in addition to other payments. If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment. If the Landowner</p>	<p>SCHEDULE 4 AESTHETIC TREE EVALUATION The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values. During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes. Enbridge Gas Inc. would contract a qualified person to complete an evaluation of the trees. The Landowners would be paid the evaluated price for the trees in addition to other payments. If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment. If the Landowner disagrees with</p>

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<p>If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment. If the landowner disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation. EVALUATION CRITERIA A four part evaluation criteria will be completed for aesthetic trees: Tree Value = Basic Value x Species Rating x Condition Rating x Location Rating Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area. (in 1983 this value was \$22.00) Species rating is a percentage rating based on the relative qualities of the tree species. Condition rating is a percentage rating based on the health of the tree. Location rating is a percentage rating based on the location of the tree.</p>	<p>If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment. If the Landowner disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation. EVALUATION CRITERIA A four part evaluation criteria will be completed for aesthetic trees: Tree Value = Basic Value X Species Rating X Condition Rating X Location Rating Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area. Species rating is a percentage rating based on the relative qualities of the tree species. Condition rating is a percentage rating based on the health of the tree. Location rating is a percentage rating based on the location of the tree.</p>	<p>disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation. EVALUATION CRITERIA A four part evaluation criteria will be completed for aesthetic trees: Tree Value = Basic Value X Species Rating X Condition Rating X Location Rating Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area. Species rating is a percentage rating based on the relative qualities of the tree species. Condition rating is a percentage rating based on the health of the tree. Location rating is a percentage rating based on the location of the tree.</p>	<p>Enbridge Gas Inc.'s evaluation a second evaluation may be completed using the same criteria as the original evaluation. EVALUATION CRITERIA A four part evaluation criteria will be completed for aesthetic trees: Tree Value = Basic Value X Species Rating X Condition Rating X Location Rating Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area. Species rating is a percentage rating based on the relative qualities of the tree species. Condition rating is a percentage rating based on the health of the tree. Location rating is a percentage rating based on the location of the tree.</p>
<p>SCHEDULE 4 Schedule of Rates for Work Performed by Owners of Land Typically all work will be done by the Company. In the event that landowners perform work on behalf of the Company, at the Company's expense, the company will remunerate the landowner in accordance with the following; 1. Stonepicking - \$10.00 per hour/per person picking by hand - \$45.00 per hour for use of tractor and wagon 2. Chisel Plowing - \$70.00 per hour 3. Cultivation - \$50.00 per hour 4. Tile Inspection - \$20.00 per hour * * Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.</p>	<p>SCHEDULE 5 Schedule of Rates for Work Performed by Owners of Land Typically all work will be done by the Company. In the event that landowners perform work on behalf of the Company, at the Company's expense, the company will remunerate the landowner in accordance with the following; 1. Stonepicking - \$10.00 per hour/per person picking by hand - \$45.00 per hour for use of tractor and wagon 2. Chisel Plowing - \$70.00 per hour 3. Cultivation - \$50.00 per hour 4. Tile Inspection - \$20.00 per hour * * Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.</p>	<p>SCHEDULE 5 Schedule of Rates for Work Performed by Landowners Typically all work will be done by the Company. If the parties agree that the Landowner will perform work on behalf of the Company, the Company will remunerate the Landowner in accordance with the following; 1. Stone picking - \$20.00 per hour/per person picking by hand - \$75.00 per hour for use of tractor and wagon 2. Chisel Plowing - \$125.00 per hour 3. Cultivation - \$100.00 per hour 4. Tile Inspection - \$35.00 per hour * * Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.</p>	<p>SCHEDULE 5 Schedule of Rates for Work Performed by Landowners Typically all work will be done by the Company. If the parties agree that the Landowner will perform work on behalf of the Company, the Company will remunerate the Landowner in accordance with the following; 1. Stone picking - \$30.00 per hour/per person picking by hand - \$100.00 per hour for use of tractor and wagon 2. Chisel Plowing - \$185.00 per hour 3. Cultivation - \$160.00 per hour 4. Tile Inspection - \$45.00 per hour * * Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.</p>

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<p>SCHEDULE 5 Wet Soils Shutdown</p> <p>The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.</p> <p>Wet Soils Shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required.</p> <p>While constructing the Company’s pipeline the Company’s senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors or other Company representatives and other members of the Joint Committee with the assistance of the construction monitor, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors/other Company representatives and other members of the Joint Committee with the assistance of the construction monitor shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e, can traffic be re-routed within the easement lands around wet area(s)) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives and other members of the Joint Committee with the assistance of the construction monitor, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse affects on the soils.</p>	<p>SCHEDULE 6 Wet Soils Shutdown</p> <p>The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.</p> <p>While constructing the Company’s pipeline the Company’s senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. 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The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives and other members of the Joint Committee, with assistance of the construction monitor, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse effects on the soils.</p>	<p>SCHEDULE 6 Wet Soils Shutdown</p> <p>The following sets out the Wet Soils Shutdown practice of Enbridge Gas Inc. for pipeline construction, repair and maintenance on agricultural lands.</p> <p>Wet soils shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required.</p> <p>While constructing the Company’s pipeline the Company’s senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. 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<p>Wet soils shutdown is a routine part of Union’s normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.</p> <p>In addition, Union’s inspection staff and the Joint Committee with the assistance of the construction monitor are responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.</p> <p>It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. Where construction activities are undertaken by the Company in wet soil conditions (as determined by the monitor), additional mitigation measures may be put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Union on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Union. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.</p> <p>Where construction activities are undertaken by the Company in wet soil conditions (as determined by the monitor),the Company shall pay to the landowner 150 % of disturbance and</p>	<p>Wet soils shutdown is a routine part of Union’s normal management process for pipeline construction activities. 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Enbridge Gas Inc. will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.</p> <p>Where construction activities are undertaken by the Company in wet soil conditions (as determined by the construction monitor), the Company shall pay to the landowner 150% of disturbance and crop loss</p>

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<p>crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150 % payment applies only once to any one area; on areas where the 150 % payment is applied, the landowner forfeits the right to top-up of crop loss damages under the L.O.U.. The 150 % payment does not affect the landowner's right to topsoil replacement where crop loss exceeds 50 % in the fifth year following construction.</p>		<p>disturbance and crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150% payment applies only once to any one area; on areas where the 150% payment is applied, the Landowner forfeits the right to top-up of crop loss payments under this agreement. The 150% payment does not affect the Landowner's right to topsoil replacement where crop loss exceeds 50% in the fifth year following construction.</p>	<p>damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150% payment applies only once to any one area; on areas where the 150% payment is applied, the Landowner forfeits the right to top-up of crop loss payments under this agreement. The 150% payment does not affect the Landowner's right to topsoil replacement where crop loss exceeds 50% in the fifth year following construction.</p>
		<p>SCHEDULE 7 Pipeline Removal Process (Existing NPS 16)</p> <p>The following sets out the sequence proposed by Union Gas Limited for the removal of the existing pipeline and related activities within the Easement and Temporary areas on agricultural lands.</p> <ol style="list-style-type: none"> 1. Trees are cleared. 2. The permanent and temporary easements are staked by a Surveyor. 3. Accesses (culverts) are installed to gain access onto the easement off of roads and across water-courses. 4. Topsoil is stripped and stock-piled off to the side, on top of topsoil. <p>Next, are the steps specific to the removal of the 16":</p> <ol style="list-style-type: none"> 5. The 16" pipeline is isolated and purged of gas to 100% air. The 16" pipeline is located and staked out in the field. 6. An excavator removes the over-burden from over top of the 16" and casts the subsoil off to the "spoil side". 7. The 16" pipe is cut, and an excavator or sideboom with a roller cradle drives alongside the 16" pipe and "lifts" it out of the ground next to the ditch. 8. An excavator with a hydraulic shear cuts the pipe into 50' lengths. 	

CAEPLA-DCLC LETTER OF UNDERSTANDING COMPARISON CHART – EB-2022-0086

STRATHROY LOBO EB-2005-0550	HAMILTON MILTON EB-2014-0261	PANHANDLE EB-2016-0186	CAEPLA-DCLC PROPOSAL EB-2022-0086
		<p>9. A Scrap Dealer places a scrap bin at each road crossing on the temporary land use area, as requested by the Pipeline Contractor.</p> <p>10. An excavator with a “bucket and thumb” grabs each 50’ length of pipe and carries it to the nearest road crossing and places it into the scrap bin.</p> <p>11. When the scrap bin is full, the Scrap Dealer takes away the bin.</p> <p>12. A dozer or exactor with a clean-up bucket, backfills the remaining ditch and levels it off.</p> <p>Installation of the 36” begins.</p>	
		<p>SCHEDULE 8 Topsoil Stripping Map</p>	<p>SCHEDULE 7 Topsoil Stripping Map</p>
			<p>SCHEDULE 8 Integrity Dig Agreement</p>

ATTACHMENT 3



Ontario Energy Board Commission de l'énergie de l'Ontario

DECISION AND ORDER

EB-2016-0186

UNION GAS LIMITED

Application for approval to construct a natural gas pipeline in the Township of Dawn Euphemia, the Township of St. Clair and the Municipality of Chatham-Kent and approval to recover the costs of the pipeline.

BEFORE: **Allison Duff**
Presiding Member

Cathy Spoel
Member

Paul Pastirik
Member

February 23, 2017

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1 INTRODUCTION AND SUMMARY

This is a decision of the Ontario Energy Board (OEB) on an application filed by Union Gas Limited (Union). Union applied under section 90(1) of the *Ontario Energy Board Act, 1998* (the Act) for leave to construct approximately 40 kilometers of 36 inch diameter pipeline from Union's Dawn Compressor Station in the Township of Dawn-Euphemia to its Dover Transmission Station in the Municipality of Chatham-Kent (the Project). A map of the Project is attached as Schedule A.

Union also applied for approval of the recovery of costs associated with the construction of the Project pursuant to section 36 of the Act; approval of a 20-year depreciation term; and approval of an accounting order to establish a Panhandle Reinforcement Deferral Account pursuant to section 36 of the Act.

Union's evidence is that the Project is needed to meet increasing demand for firm service on the Panhandle System in the Leamington-Kingsville area, from greenhouse operations, commercial and small industrial customers and anticipated residential growth.

One of the issues that arose in the proceeding was whether there were alternatives to the Project that did not require the construction of new pipeline facilities. Specifically, the issue is whether Union's customers are best served through the proposed pipeline's capacity or through capacity acquired on a contractual basis from Panhandle Eastern Pipe Line Company (Panhandle Eastern) through the Ojibway international connection point near Windsor. A map showing these interconnections is attached as Schedule B.

The OEB grants leave to construct the Project, subject to the Conditions of Approval, which are attached as Schedule C. For the reasons set out below, the OEB finds that the construction of the Project is in the public interest as it is the most reliable approach to meeting demand in the Leamington-Kingsville area.

2 THE PROCESS

A Notice of Application was issued on July 12, 2016 and was served and published by Union as directed by the OEB.

The OEB granted intervenor status to the following:

- Association of Power Producers of Ontario (APPrO)
- Building Owners and Managers Association, Greater Toronto (BOMA)
- Canadian Association of Energy and Pipeline Landowners Associations (CAEPLA)
- Canadian Manufacturers and Exporters (CME)
- Consumers Council of Canada (CCC),
- Enbridge Gas Distribution Inc. (Enbridge)
- Federation of Rental-housing Providers of Ontario (FRPO)
- Industrial Gas Users Association (IGUA)
- Liberty Oil and Gas Limited (Liberty)
- London Property Management Association (LPMA)
- Municipality of Chatham-Kent (Chatham-Kent)
- Ontario Greenhouse Vegetable Growers (OGVG)
- School Energy Coalition (SEC)
- Vulnerable Energy Consumers Coalition (VECC)

OEB staff also participated in the proceeding.

The OEB also found that APPrO, BOMA, CAEPLA, CCC, CME, FRPO, IGUA, LPMA, OGVG, SEC and VECC are eligible to apply for cost awards.

The OEB provided intervenors and OEB staff the opportunity to ask Union questions about its application through written interrogatories and a technical conference.

There was provision for intervenor evidence. No intervenors chose to file evidence.

The OEB held an oral hearing for all non-landowner issues and provided for the filing of written submissions on those issues.

Union informed the OEB that it had reached a comprehensive settlement with CAEPLA concerning all landowner issues. Union filed a summary of the settlement agreement and included a Form of Easement Agreement Addendum. Subsequently, the OEB accepted CAEPLA's request to withdraw as an intervenor in the proceeding.

The OEB agrees that Union must plan its facilities to serve on design day conditions, Because of growth in demand, additional looping or laterals from the NPS 20 pipeline into Leamington/Kingsville will not provide the necessary capacity to serve the market.

The OEB also accepts Union's evidence that additional supplies at Ojibway would not address the physical operational realities of the Panhandle System and that only the Project could do so with certainty.

The OEB finds that Union's RFP provided an opportunity for the market to respond and that it was sufficient for the purposes of this application. The RFP's exact wording and response window are not critical factors in the OEB's decision that Alternative 2 is not preferable to the Project. Increasing deliveries at Ojibway will not get the gas to Leamington-Kingsville without an inefficient supply ratio, a significant change in supply mix, the need for additional facilities and the assumption of more risk.

The OEB finds that Union reviewed a reasonable range of alternatives and considered the advantages and disadvantages of each. Union is required to explore alternatives, but once an alternative is assessed to be less appropriate, Union is not required to go further. The preferred option needs to be as good as, or better, than the alternatives analysed.

The OEB approves Union's leave to construct application as the preferred alternative to meet the growing demand in the Leamington-Kingsville area. The OEB finds that approval of the Project is cost effective and will enable a firm, secure gas supply to meet Union's five-year design day demand forecast and beyond.

3.5 OEB's Environmental Guidelines for Hydrocarbon Pipelines

In accordance with the OEB's Environmental Guidelines,⁷ Union conducted and completed routing, the environmental assessment, and consultation for the Project. An Environmental Report (ER) dated June 2, 2016 was prepared by Stantec Consulting Limited (Stantec). The ER was reviewed by the Ontario Pipeline Coordination Committee (OPCC), Lower Thames Conservation Authority, St. Clair Region Conservation Authority, the Township of St. Clair, the Township of Dawn-Euphemia, the Municipality of Chatham-Kent, affected landowners, and potentially affected First Nations and the Métis Nation of Ontario.

Review of the ER by the OPCC resulted in letters of comment from the Ministry of Environment and Climate Change, Ministry of Transportation, Technical Standards and

⁷ Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th edition, 2016.

Safety Authority and Infrastructure Ontario. There are no unresolved issues originating from the OPCC review.

Findings

The OEB finds that Union has adequately addressed the environmental issues through its proposed mitigation and restoration program and its commitment to implement the ER and OPCC recommendations.

Union indicated that it is also committed to adhering to the OEB standard conditions of approval contained in Schedule C related to mitigation and construction monitoring and reporting. The OEB is also aware that other approvals will be required for the Project. The OEB finds that Union's compliance with the OEB standard conditions of approval will ensure that the requirements of other approvals, permits, licences, and certificates are fully addressed.

3.6 Landowner matters for the Project

Union will need new permanent easements for approximately 1 kilometer of the pipeline route. Union will also need 309 acres of Temporary Land Use Areas for 2 years during construction and land restoration. For modifications of the Dover Transmission Station and the Dover Centre Valve Site, Union purchased additional land.

Union obtained permanent easement rights for 2 of 13 properties, and temporary land use rights on 52 of 126 properties, and has confirmed that it continues to negotiate with landowners for acquisition of required land rights.

During the proceeding, outstanding landowner matters were pursued by CAEPLA and its subcommittee, the Panhandle Landowner Committee (CAEPLA-PLC). CAEPLA-PLC was an active intervenor in this proceeding until it withdrew as an intervenor following a comprehensive settlement agreement with Union. Concerns raised by the CAEPLA-PLC were mainly related to construction impacts and land restoration on agricultural lands along the route of the Project.

In a letter dated December 2, 2016 CAEPLA-PLC informed the OEB that it had reached and ratified a comprehensive settlement agreement with Union and had no unresolved issues related to the proceeding. The letter also requested that it be withdrawn as a registered intervenor in the OEB proceeding.

On December 2, 2016, Union filed with the OEB a summary of the settlement agreement. Responsibilities of Union in terms of Construction and land restoration protocols are set in a Letter of Understanding (LOU). The negotiated LOU is part of the

settlement agreement. The LOU proposed by Union includes terms for an Independent Construction Monitor as well as compensation to landowners for construction and restoration related damages.

Union also submitted that any concerns raised by directly affected landowners during construction will be recorded and addressed by implementing Union's Landowner Relations Program (LRP) and associated Landowner Complaint Resolution System (LCRS). Union noted that the documentation on the outcomes of the LRP and LCRS would be part of the Final Monitoring Report filed with the OEB as required by the standard Conditions of Approval.

Findings

The OEB has no concerns with the comprehensive settlement agreement on land matters reached by Union and CAEPLA-PLC.

The OEB finds that Union has put in place appropriate mechanisms to monitor, address and document landowner related matters. Union has also committed to acquiring all of the necessary land rights before the start of construction. The OEB therefore has no concerns regarding landowner matters. The OEB notes that conditions 6a) ii-iv and 6b) v. of Schedule C require post-construction reports that demonstrate and describe how routing and construction matters and issues were monitored, addressed, and resolved.

3.7 Form of easement agreement

Pursuant to Section 97 of the Act, leave to construct cannot be granted to Union unless Union has offered or will offer to each owner of land affected by the approved route an agreement in a form approved by the OEB.

Union filed on the record a Form of Easement Agreement that it offered or will offer to all of the landowners that have no existing agreement for the roughly 1 kilometer length portion of the 40 kilometer proposed pipeline route.

Union and the CAEPLA-PLC negotiated a Form of Easement Agreement Addendum (Addendum) as part of its comprehensive settlement agreement. Union stated that it would enter into the Addendum agreement with all landowners that have an existing easement agreement dated from 1950 when the original 16 inch diameter pipeline was constructed.

Findings

The OEB approves the form of easement agreement provided by Union, as well as the Addendum that was already approved through the approval of the settlement agreement. The OEB finds that this easement agreement is consistent with agreements from other projects approved by the OEB⁸ but updated to reflect new requirements of CSA Z662-15 regarding the prohibition of storage of flammable material, solid or liquid spoil, refuse waste or effluent on the easement.

3.8 Accordance with current technical and safety requirements

Union's evidence is that the Project meets current design and safety requirements in accordance with *Ontario Regulation 210/01, Oil and Gas Pipeline Systems* under the *Technical Standards and Safety Act, 2000* and the Canadian Standards Association Z662-15 Standard (CSA Z662-15) in accordance with the Code Adoption document under the Ontario Regulations.

The Project involves abandonment of the existing 16 inch diameter pipeline and its replacement with a new 36 inch diameter pipeline by a "lift and lay" method. This method will be applied along the entire length of the route except at certain watercourse and major roads crossing where the existing pipeline will be abandoned "in place". Union stated that it would adhere to clause 10.16 of CSA Z662-15, which requires preparation of an abandonment plan prior to commencement of the abandonment process.

The provincial authority overseeing pipeline technical and safety requirements did not express any concerns with the proposed pipeline design safety or abandonment method.

Findings

The OEB finds that Union has provided adequate evidence to confirm that the proposed facilities have been designed in accordance with current technical and safety requirements.

⁸ The OEB has approved the same form of easement agreement for Union's Dawn-Parkway (Hamilton-Milton Pipeline) 2016 Expansion Project (the OEB Decision and Order, EB-2014-0261)

The revised draft accounting order is attached as Schedule D. The OEB has included the purpose of the account and a more detailed description of draft accounting entries.

3.12 Conditions of approval

OEB staff provided Union with draft standard conditions of approval for leave to construct applications under Section 90 of the Act. Union confirmed in its reply argument in this proceeding that it accepts these standard conditions of approval.

Findings

The OEB approves the standard conditions of approval for this Project, which are attached in Schedule C.

4 ORDER

THE ONTARIO ENERGY BOARD ORDERS THAT:

1. Union Gas Limited is granted leave, pursuant to subsection 90(1) of the Act, to construct a 36 inch pipeline and ancillary facilities in the Township of Dawn-Euphemia, the Township of St. Clair and in the Municipality of Chatham-Kent as shown in Schedule A. Leave to construct is subject to the Conditions of Approval set forth in Schedule C.
2. Union Gas Limited is granted approval, pursuant to section 36 of the Act, of the recovery of the cost consequences of the Project beginning from the date that the as-constructed facilities are placed in service.
3. Union and intervenors shall file any comments on the Draft Accounting Order by **March 10, 2017**.
4. Union Gas Limited shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.
5. Intervenors shall file with the OEB and forward to Union their respective cost claims by **March 20, 2017**. Cost claims must be prepared in accordance with the OEB's Practice Direction on Cost Awards.
6. Union will have until **March 24, 2017** to object to any aspect of the cost claims. A copy of the objection must be filed with the OEB and one copy must be served on the party against whose claim the objection is being made.
7. Any party whose cost claim was objected to will have until **March 30, 2017** to make a reply submission as to why the cost claim should be allowed. One copy of the submission must be filed with the OEB and one copy is to be served on Union.

All filings with the OEB must quote the file number EB-2016-0186, and be made through the OEB's web portal at <https://www.pes.ontarioenergyboard.ca/eservice/>, and consist of two paper copies and one electronic copy in searchable / unrestricted PDF format. Filings must be received by the OEB by 4:45 p.m. on the stated date. Parties should use the document naming conventions and document submission standards outlined in the RESS Document Guideline found at www.ontarioenergyboard.ca.

If the web portal is not available, parties may e-mail their documents to the attention of the OEB Secretary at BoardSec@ontarioenergyboard.ca . All other filings not filed via the OEB's web portal should be filed in accordance with the OEB's Practice Directions on Cost Awards.

DATED at Toronto February 23, 2017

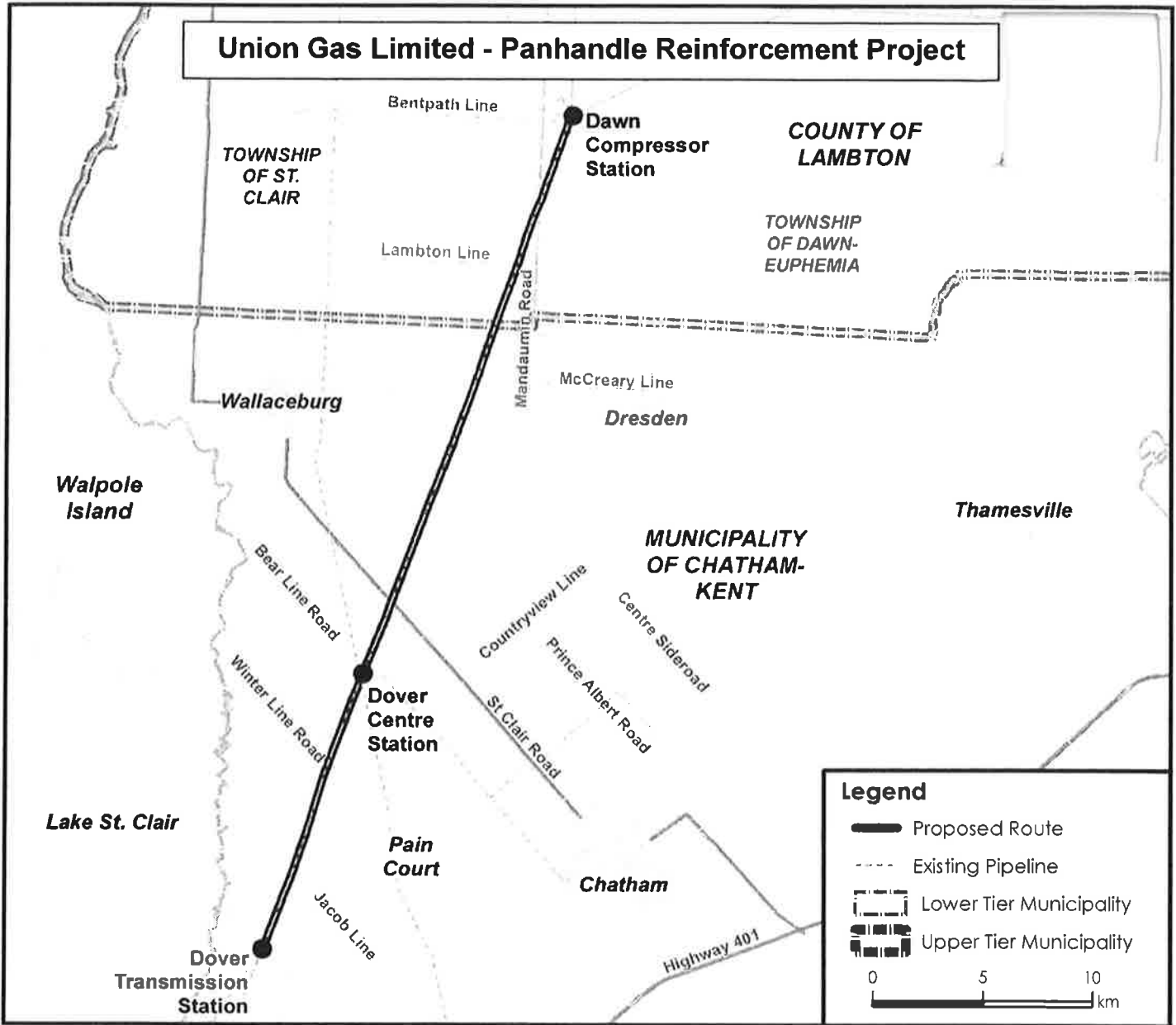
ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

SCHEDULE A - PROJECT MAP
DECISION AND ORDER
UNION GAS LIMITED
EB-2016-0186
FEBRUARY 23, 2017

Union Gas Limited - Panhandle Reinforcement Project



**SCHEDULE C – CONDITIONS OF APPROVAL
DECISION AND ORDER
UNION GAS LIMITED
EB-2016-0186
FEBRUARY 23, 2017**

Leave to Construct Conditions of Approval
Application under Sections 90 of the OEB Act
Union Gas Limited
EB-2016-0186

1. Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2016-0186 and these Conditions of Approval.
2. (a) Authorization for leave to construct shall terminate 12 months after the decision is issued, unless construction has commenced prior to that date.

(b) Union shall give the OEB notice in writing:
 - i. of the commencement of construction, at least ten days prior to the date construction commences;
 - ii. of the planned in-service date, at least ten days prior to the date the facilities go into service;
 - iii. of the date on which construction was completed, no later than 10 days following the completion of construction; and
 - iv. of the in-service date, no later than 10 days after the facilities go into service.
3. Union shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.
4. Union shall advise the OEB of any proposed change to OEB-approved construction or restoration procedures. Except in an emergency, Union shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.
5. Union shall file, in the proceeding where the actual capital costs of the project are proposed to be included in rate base, a Post Construction Financial Report, which shall indicate the actual capital costs of the project and shall provide an

explanation for any significant variances from the cost estimates filed in this proceeding.

6. Both during and after construction, Union shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:
 - a) a post construction report, within three months of the in-service date, which shall:
 - i. provide a certification, by a senior executive of the company, of Union's adherence to Condition 1;
 - ii. describe any impacts and outstanding concerns identified during construction;
 - iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;
 - iv. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions; and
 - v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.

 - b) a final monitoring report, no later than fifteen months after the in- service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:
 - i. provide a certification, by a senior executive of the company, of Union's adherence to Condition 3;
 - ii. describe the condition of any rehabilitated land;
 - iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction;
 - iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and
 - v. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.

ATTACHMENT 4



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December 2, 2016

BY RESS, EMAIL & COURIER

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

Attention: Ms. K. Walli, Board Secretary:

Re: Union Gas Limited (“Union”) – EB-2016-0186 Panhandle Reinforcement Project – Settlement Agreement Regarding Landowner Matters

This letter is further to the November 10, 2016 letter from the Ontario Energy Board (the “Board”) regarding settlement discussions on landowner matters between Union Gas Limited (“Union”) and CAEPLA-PLC. In that letter, the Board cancelled a settlement conference that was scheduled for November 21, 2016 and noted that Union and CAEPLA-PLC were free to engage in settlement discussions outside of the OEB process. Union is pleased to advise the Board that it pursued such discussions and reached a comprehensive settlement with CAEPLA-PLC’s negotiating committee on November 18, 2016, which settlement was subsequently ratified by the CAEPLA-PLC membership on November 24, 2016 (the “Settlement Agreement”).

The issues addressed by the Settlement Agreement were settled by the parties as a package, whereby compromises were made by the parties with respect to various matters to arrive at a comprehensive agreement and, as such, the agreed terms are intricately interrelated. The settlement of any particular issue and the positions of the parties in the Settlement Agreement are without prejudice to the rights of the parties to raise the same issue and/or to take any position thereon in any other unrelated proceeding, whether or not Union or CAEPLA is a party to such other unrelated proceeding.

As a condition of the Settlement Agreement, the parties agreed that CAEPLA-PLC would withdraw from the proceeding. Accordingly, concurrent with this letter CAEPLA-PLC is filing a letter with the Board to make this request.

A consolidated summary of the landowner issues settled by the parties, excluding compensation matters, is attached hereto for information purposes as Schedule ‘A’.

Yours truly,



for Jonathan Myers

cc: Zora Crnojacki, Board staff
Mark Kitchen and Vanessa Innis, Union Gas
Charles Keizer, Torys LLP
EB-2016-0186 (2016 Rates) Intervenors

SCHEDULE 'A'**SUMMARY OF LANDOWNER ISSUES SETTLED WITH CAEPLA-PLC**

A. EASEMENT OPTION AGREEMENT
The following will be added to Clause 4:
“The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any damages resulting from the exercise of the Transferee’s rights granted herein and, if the compensation is not agreed upon, it shall be determined in the manner prescribed by the <i>Expropriations Act</i> , R.S.O. 1990, Chapter E-26 or any Act passed in amendment thereof or substitution therefor.”
Clause 6(b) will be replaced with the following:
“The Option will be deemed exercised on the date (“Exercise Date”) such notice is personally served on the Transferor, delivered by courier, or five business days from the date it is deposited in the post office”.
The following will be added to Clause 7:
“The Transferee agrees that it shall be responsible to pay any and all costs associated with the transfer of the Easement, including, but not limited to, costs of registration and costs related to the removal, remedy or satisfaction of encumbrances as required by Clause 8 below, in the event the Transferee requests the same.”
B. EASEMENT AGREEMENT
Where Union relies on an existing easement agreement, Union and the landowner shall enter into an addendum to the easement agreement in the form attached hereto as <i>Appendix 1</i> ;
Union shall register a partial surrender of any blanket easement that has not previously been partially surrendered, down to strip 50 feet in width.
C. TEMPORARY LAND USE OPTION AGREEMENT
The following will be added to Clause 3:
“The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any damages resulting from the exercise of the Transferee’s rights granted herein and, if the compensation is not agreed upon, it shall be determined in the manner prescribed by the <i>Expropriations Act</i> , R.S.O. 1990, Chapter E-26 or any Act passed in amendment thereof or substitution therefor.”
D. TEMPORARY LAND USE AGREEMENT

Granting clause to define easement with reference to easement agreement(s), and reference to “proposed NPS gas pipeline” should be specified as “proposed Panhandle Reinforcement NPS 36 gas pipeline”.

E. LETTER OF UNDERSTANDING¹

Insert italicized words into Clause 2 as follows:

“. . . the Company, *in consultation with the Joint Committee and Landowner*, will work with OMAFRA . . .”

The following will be added to Clause 2:

Soil testing will be carried out at the Landowner’s request for other nematodes, pests and diseases including sugar beet nematode, with protocol to be developed and implemented where other nematodes, pests or diseases are present;

Insert italicized words into Clause 5 as follows:

The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area.

Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation.

The stakes will be located at 30 metre (98.4 foot) intervals prior to construction *and will be spray painted or otherwise marked in red*. The intervals or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.

The Company will re-stake the easement limit for post construction tile work at the request of the landowner.

Insert italicized words into Clause 6 as follows:

“. . . The topsoil and subsoil will be piled separately *with one metre separation* and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.

The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.

On areas where topsoil is to be stripped, the Company will undertake soil testing to identify any areas where topsoil that has not previously been disturbed by pipeline construction

¹ Changes indicated are relative to Letter of Understanding filed in Exhibit B.CAEPLA-PLC.5, Attachment 1.

activities can be kept separate from previously undisturbed topsoil. Where such areas are identified, the Company will strip and pile previously disturbed and previously undisturbed topsoil separately.

If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil.

At the request of the Landowner, a mulch layer will be provided between the existing topsoil and stripped topsoil. Where a sufficient crop is present the standing crop will be used as the mulch layer. Otherwise, Union will provide straw as a mulch layer.

At the landowners request separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.

At the recommendation of the Company's Soils Consultant . . .”

Insert italicized words into Clause 7 as follows:

“ . . . that it is necessary to increase the depth of the Pipeline to accommodate *facilities such as drainage and/or* processes such as deep tillage . . .”

Insert italicized words into Clause 9 as follows:

“ . . . If agreed to by the parties, the Company will return in the year following construction and will cultivate, *chisel plough and/or deep till* the easement area. When necessary, to accommodate planting schedules, the Landowner should perform *tillage* themselves, at the Company's expense . . .”

Insert italicized word into Clause 10 as follows:

“ . . . The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior *to*, during and after construction . . .”

Insert italicized words into Clause 14 as follows:

“ . . . The Company will warrant such trees for a period of *three years* following planting, provided the Landowner waters the trees as appropriate after planting.”

Add the following new covenants to Clause 15:

The Company will not open more than 6.0 continuous kilometers of trench per construction spread at a time.

The Company shall consult with the Landowner and/or the Landowner's agent(s) with respect to the existing farm biosecurity protocols and requirements in effect on the Lands (including those protocols and requirements designed to prevent the transmission of pests and diseases and those designed to preserve the integrity of organic or specialty agricultural production).

Whenever present on the Lands, the Company will conduct activities in a manner that respects required existing farm biosecurity protocols and requirements in effect.

The Company agrees to implement one joint committee for the project under the terms of reference agreed to in Schedule [X] hereof.

The Company shall consult with the Landowner prior to any removal of an object from in or on the Temporary Land Use area pursuant to the Temporary Land Use Agreement.

Insert the italicized words into Clause 15(xiv) as follows:

“If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription to rectify the problem, *which will be implemented at the cost of the Company.*”

Insert the following words at the end of Clause 15(xvi):

“The Company will provide the results of testing to the Landowner.”

Replace the covenant in Clause 15(xviii) with the following:

“To implement the Union Gas Limited – GAPLO Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.”

Replace the covenant in Clause 15(xix) with the following:

“At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined that cover over the pipeline is less than 0.9 metres, the Company shall, unless the Landowner agrees otherwise, restore depth of cover to a minimum of 0.9 metres with the importation of topsoil or by lowering the pipe. In areas where the top of the pipe is at or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.”

Insert the italicized words into Clause 15 under “Landowner Covenants” as follows:

“ i) To execute a *Clean-up Acknowledgement* when he/she is satisfied . . .”

“ iv) To only access the work area when accompanied by the Company’s designated representative. *The Company will facilitate the Landowner’s access to the work area upon request.*”

Insert the following immediately before the last paragraph of Clause 16:

“In addition, in the event that a dispute arises between the Landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to Para. _ and Schedule _ hereof, the Company may retain a mutually satisfactory independent consultant to assist in the resolution of the particular dispute.”

Insert the italicized words into Clause 22 as follows:

“The Company will assess the woodlot or hedgerow area(s) to be affected by the project and will provide a report to the Landowner identifying the trees that will be affected.

With respect to compensation for damage to woodlots, the Landowner will have the following two options:

Option 1:

Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company *and satisfactory to the Landowner, acting reasonably*. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3 . . .”

Clause 23 is replaced with the following:

“The Company agrees to pay the Landowner 100% of crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project. At the Landowner’s request, the Company will plant a cover crop on gored land.”

Clause 26 is replaced with the following:

“The Company shall assume all liability and obligations for any and all loss, damage or injury, (including death) to person(s) or property that would not have happened but for the Project and this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Landowner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not be liable to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Landowner.”

Clause 28, which refers to Schedule 2, is used to identify size specific issues requiring mitigation and/or compensation. The parties reached agreement on site specific issues for certain CAEPLA-PLC members.

A new Clause entitled “Independent Construction Monitor” is to be added immediately before Clause 30 and shall state:

The Company agrees to the appointment of an independent construction monitor for construction on agricultural lands for this project. The construction monitor will be chosen by a committee consisting of one representative from each of Union, the OEB and CAEPLA-PLC. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to the landowners and the Company at all times.

The scope of work for the construction monitor will be:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;

2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between landowners and Union;
3. To review all specific construction commitments included in Union’s construction contract;
4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

Union further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to CAEPLA-PLC. The Company’s agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.

The Company shall provide the construction monitor with a schedule of planned construction activities and not less than 24 hours’ notice of any clearing, topsoil stripping, grading, and/or reclamation activities and the construction monitor shall be provided free access, subject to safety requirements, to all construction activities.

Insert the italicized words into the Schedule entitled “Wet Soils Shutdown” as follows:

The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.

Wet soils shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required.

While constructing the Company’s pipeline the Company’s senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. *If, in the judgment of these inspectors, or other Company representatives and other members of the Joint Committee with assistance of the construction monitor, the right-of-way conditions on agricultural lands are such that construction would have an adverse effect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors and other Company representatives and other members of the Joint Committee, with the assistance of the construction monitor, shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e., whether traffic be re-routed within the easement lands around wet area(s)) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives and other members of the Joint Committee, with assistance of the construction monitor, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse effects on the soils.*

Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Union's inspection staff *and the Joint Committee, with the assistance of the construction monitor*, are responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. Where construction activities are undertaken by the Company in wet soil conditions, as determined by the Construction Monitor, additional mitigation measures may be put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Union on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Union. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.

Where construction activities are undertaken by the Company in wet soil conditions (as determined by the construction monitor), the Company shall pay to the landowner 150% of disturbance and crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150% payment applies only once to any one area; on areas where the 150% payment is applied, the Landowner forfeits the right to top-up of crop loss payments under this agreement. The 150% payment does not affect the Landowner's right to topsoil replacement where crop loss exceeds 50% in the fifth year following construction.

A new Schedule entitled "Landowner Relations and Terms of Reference for Joint Committee" is added and states as follows:

Committee Make-Up:

- i) Members shall be affected landowners, and appropriate representatives of the Company. The Joint Committee shall be composed of one CAEPLA-PLC landowner representative, one non-CAEPLA-PLC landowner representative, and three representatives of the Company. CAEPLA-PLC shall have the right to appoint a primary and alternate representative.

In addition to Wet Soils Shutdown issues, the Joint Committee's purpose is to:

- i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company;

ii) provide a brief overview of issues/concerns raised during and following construction; and,

iii) consider which items should be included in a Post Construction Report.

The objective of the Joint Committee is:

i) to provide a vehicle to address issues/concerns which arise during and following construction;

ii) to deal with any unforeseen circumstances which may arise during or following construction; and,

iii) to provide an opportunity for landowners to comment on how the Company might improve future construction practices.

In reviewing the foregoing, the types of issues which may be addressed are as follows:

i) landowner concerns that arise during and following construction;

ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed;

iii) methods of anticipating and avoiding these circumstances in the future; and,

iv) review of ongoing construction practices and procedures which might be improved in future construction.

Duration of the Joint Committee:

i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. CAEPLA-PLC shall be responsible for recruiting the CAEPLA-PLC landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.

Payment to Landowner Members:

i) The Company will pay to each landowner member of the Joint Committee ■ as an honorarium for their participation on the committee.

Appendix 1

Form of Easement Addendum Agreement



ADDENDUM TO EASEMENT AGREEMENT

(Hereinafter called "the Addendum")

BETWEEN

■
(hereinafter called the "Owner")

and

UNION GAS LIMITED
(hereinafter called the "Company")

WHEREAS the Owner is the owner in fee simple of those lands and premises more particularly described as:

PIN:

Legal Description:

(hereinafter called the "Owner's Lands").

AND WHEREAS by Agreement dated ____, 1950 and registered in the Land Registry Office for the Land Titles Division of __ as Instrument No. ____ (hereinafter called the "Easement Agreement"), and subject to the Partial Surrender of Right-of-Way or Easement dated ____ and registered as Instrument No. ____ (hereinafter called the "Partial Surrender"), the Company holds a right-of-way or easement for the purposes and upon the conditions set forth in the Easement Agreement on, over, in and/or through the strip of the Owner's Lands set forth in Schedule "A" to the Partial Surrender (hereinafter called the "Easement Lands").

NOW, THEREFORE, in consideration of the sum of Twenty-five Thousand XX/100 Dollars (\$25,000.00) payable by the Company to the Owner within 30 days of the signing of this Addendum, and in consideration of the mutual covenants and agreements set out herein, the Owner and the Company agree as follows:

1. The Owner hereby acknowledges and agrees that the Company may, pursuant to the Easement Agreement, use the Easement Lands for the Panhandle Reinforcement Project (Ontario Energy Board File No. EB-2016-0186).

2. The Company agrees that, where the NPS 36 Pipeline for the transmission of Pipeline quality natural gas as defined in the *Ontario Energy Board Act*, S.O. 1998 to be installed as part of the Panhandle Reinforcement Project (hereinafter called the "Pipeline") has been abandoned, the Company shall remove the Pipeline at the Owner's option and, upon any removal of the Pipeline (at the option of the Owner or of the Company) or upon any abandonment of the Pipeline without removal, shall remove all debris as may have resulted from the Company's use of the Easement Lands and in all respects restore the Easement Lands to its previous productivity and fertility so far

as is reasonably possible. The Pipeline shall be deemed to be abandoned where: (a) corrosion protection is no longer applied to the Pipeline, or, (b) the Pipeline becomes unfit for service in accordance with Ontario standards. The Company shall, within 60 days of either of these events occurring, provide the Owner with notice of the event. Upon removal of the Pipeline and restoration of the Easement Lands as required by this Addendum, the Owner shall release the Company from further obligations in respect of restoration.

3. The Company shall make to the Owner (or the person or persons entitled thereto) due compensation for any damages to the Easement Lands resulting from the exercise of any of the rights granted in this Addendum or in the Easement Agreement, 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, tile drains, curbs, gutters, asphalt paving, lockstone, and patio tiles interfered with by the Company shall be restored by the Company at its expense as closely as reasonably possible to the condition and function in which they existed immediately prior to such interference by the Company and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice and applicable government regulations.

4. The Company 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. In the event there is a change in the use of all, or a portion of, the Owner's Lands adjacent to the Easement Lands which results in the Pipeline no longer being in compliance with the pipeline design class location requirements, then the Transferee shall be responsible for any costs associated with any changes to the Pipeline required to ensure compliance with the class location requirements.

5. As soon as reasonably possible after the construction of the Pipeline, the Company shall level the Easement Lands and unless otherwise agreed to by the Owner, shall remove all debris as may have resulted from the Company's use of the Easement Lands therefrom and in all respects restore the Easement 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 3 of this Addendum.

6. The Company shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this Addendum and/or the Easement Agreement or anything done or maintained by the Company hereunder and/or thereunder or intended so to be and the Company shall at all times indemnify and save harmless the Owner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not be liable under the clause to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Owner.

7. In the event that the Company fails to comply with any of the requirements set out in Clauses 3, 4, or 5 hereof within a reasonable time of the receipt of notice in writing from the Owner setting forth the failure complained of, the Company shall compensate the Owner (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.

8. The covenants and agreements set out in this Addendum are and shall be of the same force and effect as a covenant running with the Owner's Land and 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.

IN WITNESS WHEREOF the parties hereto have executed and delivered this Addendum as of the

day of _____, 2016.

 Signature (Owner)

 Print Name(s) (and position held if applicable)

 Address (Transferor)

 Signature (Owner)

 Print Name(s) (and position held if applicable)

 Address (Transferor)

UNION GAS LIMITED

 Signature (Company)

Mervyn Weishar, Senior Land Specialist
 Name & Title (Union Gas Limited)

I have authority to bind the Corporation.

1-800-571-8446 x5002760
 Telephone Number (Union Gas Limited)

ATTACHMENT 5

LETTER OF UNDERSTANDING ("LOU")

Panhandle Reinforcement-Dawn to Dover Station

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SCHEDULE 1: SETTLEMENT

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SCHEDULE 8: TOPSOIL STRIPPING MAP

**LETTER OF UNDERSTANDING
("LOU")**

Between:

«Company»
«first_name1» «last_name1»
«first_name2» «last_name2»
«first_name3» «last_name3»
«first_name4» «last_name4»

hereinafter referred to as the "**Landowner**"

and

UNION GAS LIMITED

hereinafter referred to as the "**Company**"

INTRODUCTION

The Company has applied to the Ontario Energy Board to construct a NPS 36 pipeline which will run approximately 40 kilometres starting at the existing Union Gas Dawn Compressor Station, and travelling parallel to an existing NPS 20 Union Gas natural gas pipeline easement, and terminating at the existing Union Gas Dover Transmission Station. As a result it will be necessary for the Company to enter onto the Landowner's property for the purpose of first removing the existing NPS 16 pipeline and second constructing and installing the NPS 36 pipeline (the "Project").

The Company recognizes that the construction of the pipeline will result in damage to the Landowner's property and a disruption to the Landowner's daily activities for which the Company is obligated to compensate the Landowner and observe various construction techniques to minimize such damages.

It is the policy of the Company that Landowners affected by its pipeline projects be dealt with on a consistent basis that is fair to both parties. This Letter of Understanding represents the results of negotiations between the Company and the Landowner and outlines the obligations of each party with respect to:

- i) The construction of the pipeline;
- ii) Remediation of the Landowner's property; and,
- iii) Compensation to the Landowner for various damages as a result of the construction of the pipeline.

The parties acknowledge that the Company is required to adhere to all of the conditions set out in the Leave to Construct Order of the Ontario Energy Board and that the foregoing are additional undertakings that the Company has agreed upon with the Landowner on the Project. A copy of the Conditions of Approval will be mailed to the Landowner upon request.

1. Pre-Construction Meeting

Prior to construction, the Company's representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.

2. Testing For Soybean Cyst Nematode

In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company, in consultation with the Landowner and Joint Committee, will work with OMAFRA to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests. Upon request of the Landowner the Company will also

conduct soil testing for other nematodes, pests and diseases including sugar beet nematode, with protocol to be developed and implemented where other nematodes, pests or diseases are present.

3. **Continued Supply of Services**

Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.

4. **Water Wells**

To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner. Lab testing results will be made available to the Landowner on request. Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.

5. **Staking of Work Space**

The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area. Where topsoil is to be stored off easement the stakes will not be removed during the stripping operation.

The stakes will be located at 30 metre (98.4 foot) intervals prior to construction and will be spray painted or otherwise marked in red. The intervals or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.

The Company will restake the easement limit for post construction tile work at the request of the Landowner.

6. **Topsoil Stripping**

Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately, with one meter separation, and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.

The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.

If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil. At the Landowner's request, separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.

At the recommendation of the Company's Soils Consultant and/or at the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.

On areas where topsoil is to be stripped, the Company will undertake soil testing to identify any areas where topsoil that has not previously been disturbed by pipeline construction activities can be kept separate from previously undisturbed topsoil. Where such areas are identified, the Company will strip and pile previously disturbed and previously undisturbed topsoil separately, as identified on the map attached as Schedule 9.

At the request of the Landowner, a mulch layer will be provided between the existing topsoil and stripped topsoil. Where sufficient crop is present the standing crop will be used as the mulch layer. Otherwise, Union will provide straw as a mulch layer.

7. Depth of Cover

The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.

If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate facilities such as drainage and/or processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.

8. Levelling of Pipe Trench

During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.

If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:

- i) 0 to 4 inches - no additional work or compensation.
- ii) Greater than 4 inches - the Company will either:
 - (a) Strip topsoil, fill the depression with subsoil and replace topsoil, or
 - (b) Repair the settlement by filling it with additional topsoil.

If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:

- i) 0 to 4 inches - no additional work or compensation;
- ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil;
- iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner.

If following over-wintering of the topsoil, return to grade and the establishment of a cover crop, there is identifiable subsidence in excess of two (2) inches the Company will restore the affected area to grade with the importation of topsoil.

If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.

9. Topsoil Replacement, Compaction Removal and Stone Picking

The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.

Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.

The Company will pick stones prior to topsoil replacement.

Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter. After topsoil replacement, the topsoil will be tilled with an implement(s) as agreed by the Company and Landowners.

After cultivation, the Company will pick stones again.

The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.

If agreed to by the parties, the Company will return in the year following construction and will cultivate, chisel plough and /or deep till the easement area. When necessary, to accommodate planting schedules, the Landowner should perform tillage themselves, at the Company's expense (see Schedule of Rates attached as Schedule 5).

For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than 4 inches, by hand/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones in the years following where there is a demonstrable need.

10. Drainage Tiling

The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will consider reasonable requests by the Landowner to construct additional tile runs near damaged lands. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company's activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company's activities, including future maintenance operations and problems caused by the Company's contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company's operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner's satisfaction.

The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior to, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or temporary tile construction required on their land. The Consultant will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.

Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre-construction tiling plans where required. The purpose of pre-construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement and temporary land use limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or greater crossing the easement. The Company will ensure that any such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.

During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan and profile for each affected owner. These post construction tile plans will show the Landowner

exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.

During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.

The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.

Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:

- i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, or stone pit drain with pea gravel, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.
- ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will consider adding two drains between pipelines where necessary. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.

The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.

In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.

Once the tiling is complete the Consultant will adjust all tile plans to reflect the as-constructed information and a copy will be provided to the Landowner for their records.

11. Water Accumulation during Construction

The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.

12. Access Across the Trench

Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from crossing the trench line with farm equipment, the Company will improve crossing conditions either by further replacement and/or compaction of subsoil at the previous plug locations. Should

conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.

Following construction, the Company shall ensure that the landowner shall have access across the former trench area and easement.

13. Restoration of Woodlots

If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Union will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.

14. Tree Replacement

The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.

For windbreaks/hedgerows the Company will implement the following practice:

- i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.
- ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.

The Company will warrant such trees for a period of three years following planting, provided the Landowner waters the trees as appropriate after planting.

15. Covenants

Company covenants as follows:

- i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.
- ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.
- iii) Whenever possible, all vehicles and equipment will travel on the trench line.
- iv) All subsoil from road bores will be removed.
- v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.
- vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.
- vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.
- viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.
- ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.
- x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages.
- xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.
- xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.

- xiii) To ensure suitable passage and land access for agricultural equipment during construction.
- xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription to rectify the problem, which will be implemented at the cost of the Company.
- xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.
- xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil. The Company will provide the results of the testing to the Landowner
- xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.
- xviii) To implement the Union Gas Limited - GAPLO Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.
- xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined the cover over the pipeline is less than 0.9 metres, the Company shall, unless the Landowner agrees otherwise, restore depth of cover to a minimum of 0.9 meters with the importation of topsoil or by lowering the pipeline. In areas where the top of the pipe is at or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.
- xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company's Consultant and be from a source approved by the landowner.
- xxi) To implement Union's wet soil shut down practice as described in Schedule 6.
- xxii) The Company will not open more than 6.0 continuous kilometers of open trench per construction spread at a time.
- xxiii) The Company shall consult with the Landowner and/or Landowner's agent(s) with respect to the existing farm biosecurity protocols and requirements in effect on the Lands (including those protocols and requirements designed to prevent the transmission of pests and diseases and those designed to preserve the integrity of organic or specialty agriculture production). Whenever present on the Lands, the Company will conduct activities in a manner that respects existing farm biosecurity protocols and requirements in effect.
- xxiv) The Company agrees to implement one joint committee for the project under the terms of reference set out in article 31 hereof.
- xxv) The Company shall consult with the Landowner prior to any removal of an object from in or on the Temporary Land Use area pursuant to the Temporary Land Use Agreement.

Landowner covenants as follows:

- i) To execute a Clean-up Acknowledgement when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction accompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.
- ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.
- iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.

- iv) To only access the work area when accompanied by the Company's designated representative. The Company will facilitate the Landowner's access to the work area upon request.

16. Dispute Resolution

In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:

- i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,
- ii) The establishment of levels of compensation for specialty crops as in Article 21.
- iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.

In addition, in the event that a dispute arises between the Landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to article 31 the Company may retain a mutually satisfactory independent consultant to assist in the resolution of the particular dispute.

Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.

17. Land Rights - Easements

Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.

Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at an Ontario Municipal Board Compensation Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.

18. Land Rights – Temporary Land Use Agreements and Top Soil Storage

These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.

19. Damage Payments

Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements, and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is completed. Top soil storage damages will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.

20. Disturbance Damages

Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer. Other land uses may qualify for Disturbance Damages which are site-specific in nature and

recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected Landowner to address these site-specific issues.

21. Construction Damages – Crop Loss

The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:

- i) year of construction and future crop loss;
- ii) stone picking beyond the second year following construction;
- iii) Crop losses associated with establishment of a cover crop.

Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the "One Time" program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.

Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:

- i) Third year crop loss under "One Time" Program = 50%.
- ii) Actual crop loss following investigation and sampling = 60%.
- iii) Difference payable to Landowner = 10%.

Crop Loss for topsoil storage Areas

Compensation for crop loss on topsoil storage areas will be as follows:

- In year of construction - 100% crop loss;
- In years after construction - measured crop loss;
- Payments will be based upon actual area used for topsoil storage;
- Compensation will not be prepaid;
- Compensation will be paid on an as incurred basis.

Speciality Crops

The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project for specialty crops. Specialty crops include tobacco, produce (eg. carrots, peas, lentils) sugar beets and registered seeds. In the event the Landowner does not want to accept the one-time settlement compensation will be negotiated on a site specific basis.

Post construction cover crop program

In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and Food. The cost of seed planted over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.

22. Woodlots and Windbreak/Hedgerow Trees

The Company will assess the woodlot or hedgerow area(s) to be affected by the Project and will provide a report to the Landowner identifying the trees that will be affected.

With respect to compensation for damage to woodlots, the Landowner will have the following two options:

Option 1:

Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company and satisfactory to the Landowner, acting reasonably. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.

Option 2:

The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.

With respect to compensation for damage to other wooded areas:

Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.

Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.

The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected Landowners and payment will be made in accordance with the reports.

The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.

23. Gored Land

The Company agrees to pay the Landowner 100% crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project. At the Landowner's request, the Company will plant a cover crop on gored land.

24. Insurance

Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.

25. Abandonment

Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner

26. Liability

The Company shall assume all liability and obligations for any and all loss, damage or injury (including death) to person(s) or property that would not have happened but for the Project and this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Landowner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not liable be to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or wilful misconduct of the Landowner.

27. Assignment

All rights and obligations contained in this agreement shall extend to, be binding upon, and inure 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. The

Company shall not assign this agreement without prior written notice to the Landowner and, despite such assignment, the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.

28. Site Specific Issues

Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.

29. Compensation Levels

The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.

30. Independent Construction Monitor

The Company agrees to the appointment of an independent construction monitor for construction on agricultural lands for this project. The construction monitor will be chosen by a committee consisting of one representative from each of Union, the OEB and CAEPLA-PLC. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to the Landowners and the Company at all times.

The scope of work for the construction monitor will be:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between Landowners and Union;
3. To review all specific construction commitments included in Union’s construction contract;
4. To respond to specific requests by Landowners and the committee within 24 hours while maintaining limited contact with Landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

Union further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to CAEPLA-PLC representative. The Company’s agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.

The Company shall provide the construction monitor with a schedule of planned construction activities and not less than 24 hours’ notice of any clearing, topsoil stripping, grading, and/or reclamation activities and the construction monitor shall be provided free access, subject to safety requirements, to all construction activities.

31. Landowner Relations and Terms of Reference of Joint Committee

Committee Make-Up

- i) Members shall be affected Landowners, and appropriate representatives of the Company. The Joint Committee shall be composed of one CAEPLA-PLC Landowner representative, one non-CAEPLA-PLC Landowner representative, and three representatives of the Company. CAEPLA-PLC shall have the right to appoint a primary and an alternate representative.

In addition to Wet Soils Shutdown issues, the Joint Committee’s purpose is to:

- i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company;
- ii) provide a brief overview of issues/concerns raised during and following construction; and,
- iii) consider which items should be included in a Post Construction Report.

The objective of the Joint Committee is to:

- i) to provide a vehicle to address issues/concerns which arise during and following construction;
- ii) to deal with any unforeseen circumstances which may arise during or following construction; and,
- iii) to provide an opportunity for landowners to comment on how Union might improve future construction practices.

In reviewing the foregoing, the types of issues which may be addressed are as follows:

- i) Landowner concerns that arise during and following construction’;
- ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed;
- iii) methods of anticipating and avoiding these circumstances in the future; and,
- iv) review of ongoing construction practices and procedures which might be improved in future construction.

Duration of the Joint Committee

- i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. CAEPLA-PLC shall be responsible for recruiting the CAEPLA-PLC Landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.

Payment to Landowner members

- i) The Company will pay to each Landowner member of the Joint Committee including both CAEPLA-PLC primary and alternate representatives, at his or her direction a total payment of \$15,000 plus H.S.T. as an honorarium for his or her participation on the committee.

32. Integrity Dig Agreement

The Integrity Dig Agreement will be utilized for all Integrity Digs pertaining to this pipeline and the existing paralleling NPS20 pipeline from Dawn to Dover Station.

Dated at _____, Ontario this ____ day of _____, 2016.

UNION GAS LIMITED

Name & Title:

Dated at _____, Ontario this ____ day of _____, 2016.

Witness:

Landowner:

Landowner:

Landowner:

Landowner:

SCHEDULE 1: SETTLEMENT

Property No.: ____, Landowner(s): _____

The parties to this Letter of Understanding dated the ____ day of _____, 2016, in consideration of making this settlement have summarized below all the obligations, claims, damages and compensation arising from and for the required land rights and the pipeline construction across the Landowner(s)' property, name: _____.

(Check all applicable items of compensation)

NOTE: Refer to APPENDIX "C" within Option Agreements for site specific details

Yes NoLAND RIGHTS

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Easement @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Temporary Land Use @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Topsoil Storage Land Use @	\$	per acre

DAMAGES

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Disturbance @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Disturbance @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Disturbance @	\$	per acre of Top Soil Storage area

CROP LOSS

<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of Top Soil Storage area

NON-AGRICULTURAL DAMAGE PAYMENTS

<input type="checkbox"/>	<input type="checkbox"/>	Non-agricultural Lands @	\$	per acre
<input type="checkbox"/>	<input type="checkbox"/>	Woodlots @	\$	per acre

OBLIGATIONS

 a) This Letter of Understanding.

 b) Attached as Schedule 2 any other special requirements or compensation issues.

Initialed for identification by owner(s): _____.

Approval (Union Gas Limited): _____.

SCHEDULE 2: SITE SPECIFIC ISSUES

Property No.:_____, Landowner(s): _____

SCHEDULE 3**WOODLOT EVALUATION**

At the time of signing of the Letter of Understanding the Landowners with woodlots will be given three options.

1. take a one time full and final for the total easement.
2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately.
3. take the crop monitoring program and have the woodlot evaluated separately.

Woodlots will be assessed in the following manner:

A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management.

This volume will then be determined on an annual basis.

Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot.

This value will then be present valued using the same formula as the one time payment option.

SCHEDULE 4

AESTHETIC TREE EVALUATION

The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values.

During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes.

Union would contract a qualified person to complete an evaluation of the trees.

The Landowners would be paid the evaluated price for the trees in addition to other payments.

If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment.

If the Landowner disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation.

EVALUATION CRITERIA

A four part evaluation criteria will be completed for aesthetic trees:

Tree Value = Basic Value **X** Species Rating **X** Condition Rating **X** Location Rating

Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area.

Species rating is a percentage rating based on the relative qualities of the tree species.

Condition rating is a percentage rating based on the health of the tree.

Location rating is a percentage rating based on the location of the tree.

SCHEDULE 5

Schedule of Rates for Work
Performed by Landowners

Typically all work will be done by the Company. If the parties agree that the Landowner will perform work on behalf of the Company, the Company will remunerate the Landowner in accordance with the following;

- | | | | |
|----|-----------------|------------|---------------------------------------|
| 1. | Stone picking | - \$20.00 | per hour/per person picking by hand |
| | | - \$75.00 | per hour for use of tractor and wagon |
| 2. | Chisel Plowing | - \$125.00 | per hour |
| 3. | Cultivation | - \$100.00 | per hour |
| 4. | Tile Inspection | - \$35.00 | per hour * |

* Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.

SCHEDULE 6

Wet Soils Shutdown

The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.

Wet soils shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required.

While constructing the Company's pipeline the Company's senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors, or other Company representatives and other members of the Joint Committee with assistance of the construction monitor, the right-of-way conditions on agricultural lands are such that construction would have an adverse effect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors and other Company representatives and other members of the Joint Committee, with the assistance of the construction monitor, shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e., whether traffic be re-routed within the easement lands around wet area(s) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives and other members of the Joint Committee, with assistance of the construction monitor, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse effects on the soils.

Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Union's inspection staff and the Joint Committee, with the assistance of the construction monitor, are responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. Where construction activities are undertaken by the Company in wet soil conditions, additional mitigation measures may be put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Union on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Union. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted. Where construction activities are undertaken by the Company in wet soil conditions (as determined by the construction monitor), the Company shall pay to the landowner 150% of disturbance and crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150% payment applies only once to any one area; on areas where the 150% payment is applied, the Landowner forfeits the right to top-up of crop loss payments under this agreement. The 150% payment does not affect the Landowner's right to topsoil replacement where crop loss exceeds 50% in the fifth year following construction.

SCHEDULE 7

Pipeline Removal Process (Existing NPS 16)

The following sets out the sequence proposed by Union Gas Limited for the removal of the existing pipeline and related activities within the Easement and Temporary areas on agricultural lands.

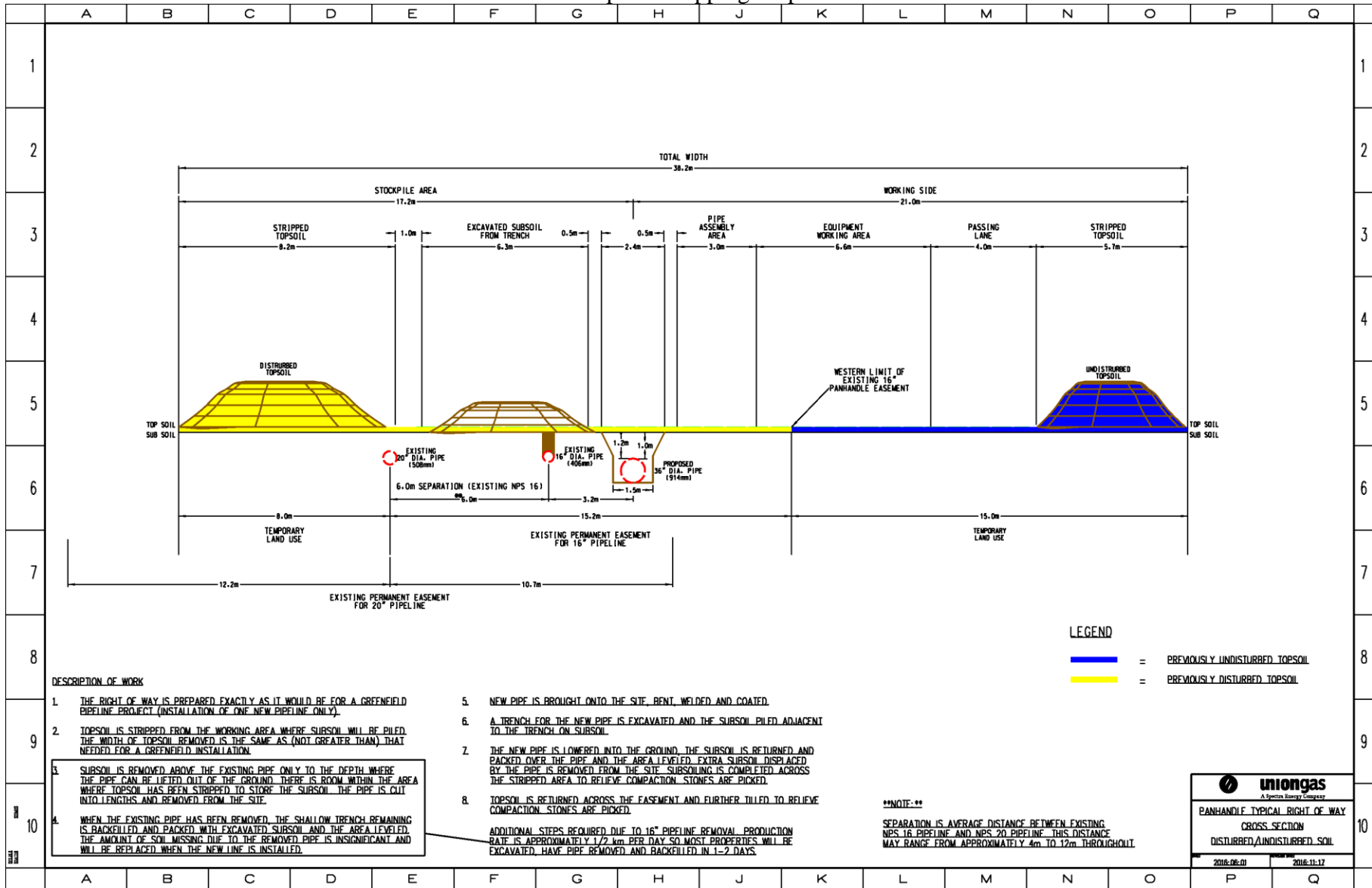
1. Trees are cleared.
2. The permanent and temporary easements are staked by a Surveyor.
3. Accesses (culverts) are installed to gain access onto the easement off of roads and across water-courses.
4. Topsoil is stripped and stock-piled off to the side, on top of topsoil.

Next, are the steps specific to the removal of the 16”:

5. The 16” pipeline is isolated and purged of gas to 100% air. The 16” pipeline is located and staked out in the field.
6. An excavator removes the over-burden from over top of the 16” and casts the subsoil off to the “spoil side”.
7. The 16” pipe is cut, and an excavator or sideboom with a roller cradle drives alongside the 16” pipe and “lifts” it out of the ground next to the ditch.
8. An excavator with a hydraulic shear cuts the pipe into 50’ lengths.
9. A Scrap Dealer places a scrap bin at each road crossing on the temporary land use area, as requested by the Pipeline Contractor.
10. An excavator with a “bucket and thumb” grabs each 50’ length of pipe and carries it to the nearest road crossing and places it into the scrap bin.
11. When the scrap bin is full, the Scrap Dealer takes away the bin.
12. A dozer or exactor with a clean-up bucket, backfills the remaining ditch and levels it off.

Installation of the 36” begins.

SCHEDULE 8 Topsoil Stripping Map



ATTACHMENT 6

AFFIDAVIT OF EXECUTION
COUNTY OF *Kent*

I, *J. W. Thompson*
of the *City* of *Chatham*
in the County of *Kent*
Agent make oath and say:

TO WIT:

1. THAT I was personally present and did see the within instrument and duplicate thereof duly signed, sealed and executed by

2. THAT the said Instrument and Duplicate were executed by the said part *Y* of the part *Y* thereof at the *Township* *Lawson* County of *Lambton*

3. THAT I know the said part *Y*

4. THAT I am a subscribing witness to the said Instrument and Duplicate.

Sworn before me at the *City* *Chatham*

in the County of *Kent*
this *4th* day of *December*

J. W. Thompson

A. D. 19*45*
New Sadler
A Commissioner for taking affidavits in the H. C. J., etc.

No. 23351 Lawson
D.P.
DATED *5 Nov* 19*45*

FROM

--TO--

UNION GAS COMPANY OF CANADA,
LIMITED

RIGHT OF WAY

copy

Goode

I certify that the within instrument is duly executed and registered in the Registry Office for the Survey Division of the County of *Lambton*, in Book

L. C. P. in the Township
Lawson
at *10 o'clock A.M.* of the *23* day
of *November*, 19*45*
NUMBER *23351*
W. J. D. ...
DEPT. REGISTRY

W. J. D. ...

INDEXED	<i>Y</i>
COPIED	<i>A.P.</i>
COMPARED	<i>noc</i>
PARTICULARS I.T.	<i>noc</i>
FILED	<i>noc</i>
TRANSFER TAX	\$ <i>2.50</i>
REGISTRATION	\$ <i>2.50</i>

Form No. 259-12-44-2000.

AGREEMENT

FOR AND IN CONSIDERATION of the sum of One Dollar (\$1.00) to me in hand paid, the receipt whereof is hereby acknowledged,

I,
..... *Twp. # 2 Steepwater* of the Township
of *Hamilton* in the County of
Farmer, Owner and I
Mortgagee, for myself, my heirs, executors, administrators and assigns,

Do Hereby Grant to

UNION GAS COMPANY OF CANADA, LIMITED

its successors and assigns, the right to enter from time to time upon my land situate in the Township of *Lawson* in the county of *Hamilton* described as follows: namely,

..... *16 1/2 of Lot 28 cont.*

containing by admeasurement *1.7* acres more or less, and the right to lay, maintain, operate, renew and repair, in, through, along and under the said land a pipeline or pipelines in such location or locations as the Company may decide, together with the right to enter upon said land and remove any pipeline or pipelines so laid whenever the Company shall decide so to do.

In consideration of the above grant, Union Gas Company of Canada, Limited, is to pay to the owner as soon as a pipeline is laid, the sum of Fifty Cents (50 cts.) for every rod in length of the said pipeline so laid in, under or upon said land.

All such pipelines shall be laid at sufficient depth so as not to interfere with the cultivation or drainage of the said land.

The Company shall pay to the Owner all damages done to growing crops by any of the said operations above set out, including any and all damages done in the final removal of the said pipeline or pipelines.

The right hereby granted shall continue so long as any pipeline remains in or under the said lands but shall cease and be at an end when all of the pipelines have been removed.

DATED this *16* day of *November* 19*45*

SIGNED, SEALED AND DELIVERED
in the presence of
.....
.....
.....

.....
.....
.....

UNION GAS COMPANY OF CANADA LIMITED

[Signature] General Manager
[Signature] Secretary

APPROVED BY
[Signature]
[Signature]

TECUMSEH GAS STORAGE LIMITED

GRANT OF EASEMENT

THIS INDENTURE made the January 9 1964
In Pursuance of the Short Forms of Conveyances Act

BETWEEN: _____

of the _____ Township _____ of
_____ Sombra _____ in the County
of _____ Lambton _____ Province
of Ontario, hereinafter called "the Grantor" OF THE FIRST PART
and

TECUMSEH GAS STORAGE LIMITED

A company incorporated under the laws of Ontario with head office at the City of Toronto, in the County of York, hereinafter called "the Grantee" OF THE SECOND PART
and

of the said _____ of
_____, wife
(wives) of the Grantor, OF THE THIRD PART

and
_____ hereinafter called "the Mortgagee" OF THE FOURTH PART

and
_____ Union Gas Company of Canada Limited OF THE FIFTH PART

WHEREAS the Grantor is the registered owner of the following lands and premises (hereinafter referred to as "the Grantor's lands") in the Township of Dawn, in the County of Lambton and Province of Ontario, namely:
The west half of lot 28, Concession 1.

AND WHEREAS the Mortgagee is the registered holder of a mortgage or charge affecting the Grantor's lands (and the Party of the Fifth Part has a claim against same or interest therein);

WITNESSETH that, in consideration of the sum of One Dollar (\$1.00) of lawful money of Canada now paid by the Grantee to the Grantor, the receipt of which is hereby acknowledged, and of other good and valuable consideration, the Grantor (and the Mortgagee and/or the Party of the Fifth Part) do hereby GRANT, CONVEY, TRANSFER AND CONFIRM unto the Grantee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands of the Grantee described in Schedule "A" hereto, the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Grantor's lands 50 feet in width as more particularly described in Schedule "B" hereto (hereinafter referred to as "the said lands") to survey, lay, construct, maintain, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use, and/or operate a pipeline for the transmission of gas (hereinafter referred to as "the said pipeline") including there-with all such buried attachments, equipment and appliances for cathodic protection which the Grantee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the said lands for its servants, agents, employees, those engaged in its business, contractors, and

(2)

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, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:--

1. The rights, privileges and easement hereby granted shall continue in perpetuity or until the Grantee shall execute and deliver a surrender thereof.
2. The Grantee shall make to the Grantor (or the person or persons entitled thereto) due compensation for any physical damages resulting from the exercise of any of the rights herein granted, and, if the compensation is not agreed upon by the Grantee and the Grantor, it shall be determined in the manner prescribed by The Energy Act, R.S.O. 1960, Chapter 122, or any Act passed in amendment thereof or substitution therefor. Any gates, fences and tile drains interfered with by the Grantee shall be restored by the Grantee at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Grantee, and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.
3. The said pipe line (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 8 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the said lands nor ordinary cultivation of the said lands nor any tile drainage system existing in the said lands at the time of installation of the said pipe line nor any planned tile drainage system to be laid in the said lands in accordance with standard drainage practice, if the Grantee is given notice of such planned system prior to the installation of the said pipe line; provided that the Grantee may leave the said pipe line 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.
4. As soon as reasonably practicable after the construction of the said pipe line, the Grantee shall level the said lands and unless otherwise agreed to by the Grantor, shall remove all debris therefrom and in all respects restore the said lands to their former state so far as is practical save and except for items in respect of which compensation is due under Clause 2 hereof.
5. In the event that the Grantee 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 Grantor setting forth the failure complained of, the Grantee shall compensate the Grantor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure.
6. Except in case of emergency, the Grantee shall not enter upon any lands of the Grantor, other than the said lands, without the consent of the Grantor. In case of emergency the right of entry upon the Grantor's lands for ingress and egress to and from the said lands is hereby granted.
7. The Grantor shall have the right to fully use and enjoy the said lands except as may be necessary for any of the purposes hereby granted to the Grantee, provided that without the prior written consent of the Grantee, the Grantor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the said lands any tree, pit, well, foundation, pavement, building or other structure or installation. Notwithstanding the foregoing, the Grantee upon request shall consent to the Grantor erecting or repairing fences, constructing or repairing his tile drains and domestic sewer pipes, water pipes and utility pipes and constructing or repairing his lanes, roads, driveways, pathways, and walks across, on and in the said lands or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Grantor shall (a) give the Grantee at least five (5) clear days notice in writing pointing out the work desired so as to enable the Grantee 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 said 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 said pipeline.
8. 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 said lands any valves and/or take-offs and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Grantee shall pay to the Grantor (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 Energy Act, R.S.O. 1960, Chapter 122, or any Act passed in amendment thereof or substitution therefor. The Grantee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the said lands.
9. Notwithstanding any rule of law or equity and even though the said pipe line and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Grantee.
10. Neither this Agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Grantee's rights to acquire the said lands or any other portion or portions of the Grantor's lands under the provisions of The Energy Act, R.S.O. 1960, Chapter 122, or any other laws, which rights the grantee may exercise at its discretion in the event of the Grantor being unable or unwilling for any reason to perform this Agreement or give to the Grantee a clear and unencumbered title to the easement herein granted.
11. The Grantor 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 Grantee may at its expense prepare and that the Grantee, 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 Grantor is not the sole owner of the said lands, this Indenture shall nevertheless bind the Grantor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all monies payable hereunder shall be paid to the Grantor only in the proportion that his interest in the said lands bears to the entire interest therein.
12. In the event that the Grantee shall be in default hereunder, the Grantor shall have the right to declare this easement cancelled after the expiration of 15 days from service upon the Grantee of notice in writing of such default, unless during such 15 day period the Grantee shall commence to rectify such default.
13. All payments under these presents may be made either in cash or by cheque of the Grantee and may be made to the Grantor (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 Grantor and Grantee at the addresses noted below or to

AFFIDAVIT REQUIRED BY SUBSECTION 2 OF SECTION 53 OF THE REGISTRY ACTR.S.O. 1960, CHAPTER 348

PROVINCE OF ONTARIO)

COUNTY OF YORK)

TO WIT:)

I, HARRY WILLIAM DONALDSON KILGOUR, of the City
of Toronto, in the County of York, Solicitor,
make oath and say:-

1. That I am the Solicitor for Tecumseh Gas Storage Limited, the corporation named in the within indenture.
2. That the said indenture is not made contrary to Section 2 of The Mortmain and Charitable Uses Act.

SWORN before me at the City)
of Toronto, in the County of)
York, this 27th day of)
January, 1964.)

[Handwritten Signature]
A Commissioner for taking Affidavits, etc.

(3)

such other address in either case as the Grantor or the Grantee, respectively, may from time to time appoint in writing.

14. 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.

And, the said wife (wives) of the Grantor(s) hereby bar(s) dower in the said lands.

And, the Mortgagee and the Party of the Fifth Part covenant that the Grantee shall have quiet possession of the rights, privileges and easement hereby granted, in priority to their interests in the said lands.

IN WITNESS WHEREOF the Parties hereto have executed and delivered this Indenture as of the day and year first above written.

SIGNED, SEALED and DELIVERED
in the presence of

R.R.#1, Wilkesport, Ontario

(address)

TECUMSEH GAS STORAGE LIMITED

DIRECTOR

SECRETARY

55 Adelaide Street East, Toronto, Ontario

(address)



CAEPLA-DCLC 130
2
Y 10 0 1
M 0 1
O M I 8 7

APPROVED
Form.....
Terms

SCHEDULE "A"

In the Township of Moore, in the County of Lambton and Province of Ontario and being composed of the north twenty (20) acres of the east quarter of lot Nineteen (19) in Concession Seven (7) of the said Township, which may be more particularly described as follows:

PREMISING that the bearings herein are astronomic and are referred to the meridian through the southeast corner of Lot Thirteen (13) in the Fifth (5th) Concession of the Township of Moore (Longitude $82^{\circ} 19' 43''$ W) and relating all bearings herein thereto

COMMENCING at the northeast angle of said lot Nineteen (19); thence north eighty-eight degrees forty minutes west ($N 88^{\circ} 40' W$) along the north limit of said lot Nineteen (19) a distance of Four hundred and Ninety-three point six feet ($493.6'$) to the northwest angle of the east quarter of said lot Nineteen (19); Thence south one degree, thirty-nine minutes twenty seconds west ($S 1^{\circ} 39' 20'' W$) along the line between the east one quarter and the west three quarters of Lot Nineteen (19) aforesaid, a distance of one thousand seven hundred and sixty-five point zero feet ($1,765.0'$) to a point where a standard iron bar has been planted; thence south eighty-eight degrees forty minutes east ($S 88^{\circ} 40' E$) parallel to the north limit of said lot Nineteen (19) a distance of four hundred and ninety-three point six feet ($493.6'$) to a point in the east limit of said lot Nineteen (19) where a standard iron bar has been planted; thence north one degree thirty-nine minutes twenty seconds east ($N 1^{\circ} 39' 20'' E$) along the east limit of said lot Nineteen (19) a distance of one thousand seven hundred and sixty-five point zero feet ($1,765.0'$) to the POINT OF COMMENCEMENT.

* * * * *

SCHEDULE "B"

No. 5

Re:

DESCRIPTION OF PART OF LOT 28,
CONCESSION 1,
TOWNSHIP OF DAWN,
COUNTY OF LAMBTON.

ALL AND SINGULAR that certain parcel or tract of land, situate, lying and being in the Township of Dawn, County of Lambton, and Province of Ontario, being composed of part of Lot 28, Concession 1, in the said Township and being more particularly described as follows:-

COMMENCING at a point in the Southerly limit of the said Lot 28, distant one thousand six hundred and twenty-seven and two tenths feet (1627.2') measured Easterly from the South West angle of the said lot;

THENCE North 36° 16' 30" West, eight hundred and thirteen and four tenths feet (813.4');

THENCE North 37° 28' West, one thousand six hundred and twenty and nine one-hundredths feet (1620.09');

THENCE North 34° 15' 20" West, one hundred and fifty-eight and twenty-five one-hundredths feet (158.25') to a point in the Northerly limit of the said lot;

THENCE Easterly along the said Northerly limit, sixty-two and eighty-two one-hundredths feet (62.82') to a point;

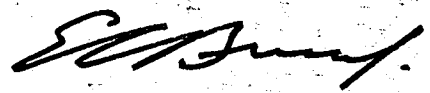
THENCE South 34° 15' 20" East, one hundred and eighteen and eighty-two one-hundredths feet (118.82') to a point;

THENCE South 37° 28' East, one thousand six hundred and twelve and one tenth feet (1612.1') to a point;

THENCE South 36° 16' 30" East, eight hundred and fifty-four and nineteen one-hundredths feet (854.19') to a point in the Southerly limit of the said lot;

THENCE Westerly along the last mentioned limit, sixty-four and twenty-one-hundredths feet (64.20') to the Point of Commencement.

The above described land comprise an area of 2.971 Acres.



Affidavit as to Legal Age and Marital Status

PROVINCE OF ONTARIO } I,
 To Wit: } of the Township of Sombra
 } in the County of Lambton

in the within instrument named, make oath and say that at the time of the execution of the within instrument,

1. I was of the full age of twenty-one years;

~~I do not know that~~ *[Signature]*
~~who also executed the within instrument was of the full age of twenty-one years~~ *[Signature]*

~~I was legally married to~~ *[Signature]*
~~named therein:~~

4. I was ~~unmarried/divorced~~ widower. *[Signature]*

SWORN before me at the *Township*
 of *Sombra*
 in the *County of Lambton*
 this *9th* day of *January*
 A.D. 19 *64*

A Commissioner for taking Affidavits, etc.)

[Signature]
KENNETH N. WILLING
 MY COMMISSION EXPIRES
 3 OCTOBER 1966

AFFIDAVIT OF EXECUTION

PROVINCE OF ONTARIO

County of

I, of the in the

of of

TO WIT:

, make oath and say:

- 1. THAT I was personally present and did see the within Instrument and a Duplicate thereof duly signed, sealed and executed by the part thereto.
- 2. THAT the said Instrument and Duplicate were executed by the said part of at the
- 3. THAT I know the said part
- 4. THAT I am a subscribing witness to the said Instrument and Duplicate.

SWORN before me at the of in the of this day of 19

A Commissioner for taking Affidavits, etc.

AFFIDAVIT OF EXECUTION

PROVINCE OF ONTARIO

County of

I, of the in the

of of

TO WIT:

, make oath and say:

- 1. THAT I was personally present and did see the within Instrument and a Duplicate thereof duly signed, sealed and executed by the part thereto.
- 2. THAT the said Instrument and Duplicate were executed by the said part of at the
- 3. THAT I know the said part
- 4. THAT I am a subscribing witness to the said Instrument and Duplicate.

SWORN before me at the of in the of this day of 19

A Commissioner for taking Affidavits, etc.

AFFIDAVIT OF EXECUTION

PROVINCE OF ONTARIO

County of

I, Kenneth N. Willing of the City of Chatham in the County of Kent

of of

TO WIT:

Landman, make oath and say:

- 1. THAT I was personally present and did see the within Instrument and a Duplicate thereof duly signed, sealed and executed by one of the parties thereto.
- 2. THAT the said Instrument and Duplicate were executed by the said party at the Township of Sombra
- 3. THAT I know the said party
- 4. THAT I am a subscribing witness to the said Instrument and Duplicate.

SWORN before me at the City of Chatham in the County of Kent of this 14th day of January 1964

Douglas W. Thomas A Commissioner for taking Affidavits, etc.

DOUGLAS W. THOMAS
MY COMMISSION EXPIRES
4 OCTOBER 1965

193644

REGISTERED

No. 193644

I certify that the within Instrument is duly entered and registered in the Registry Office for the Registry Division of the County of Lambton, at 9³⁰ o'clock AM. of the 4 day of Feb. A.D., 19 64

DATED the 9th day of January 1964

FROM

J. H. ...
REGISTRAR

E

-TO-

TECUMSEH GAS STORAGE LIMITED

EASEMENT AGREEMENT

Page 28/1
diagram
Sawn

55 Adelaide Street East, Toronto, Ontario

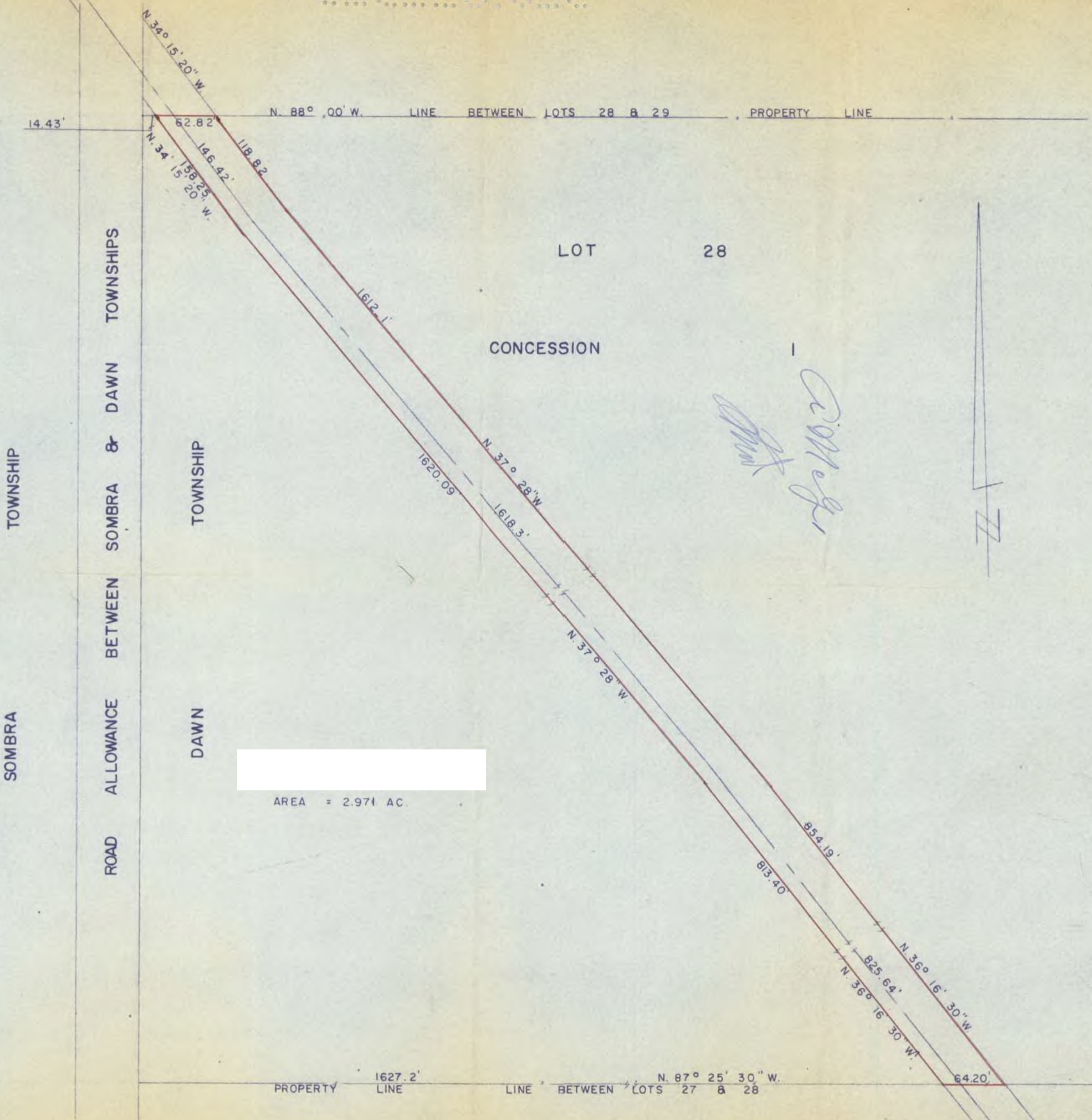
Imperial Oil Ltd.
Chatham

AD. *600*

REGISTERED

L-193644

PROPERTY PLAN - [REDACTED] - 30 INCH GAS TRANSMISSION LINE



AREA = 2.971 AC.

NOTE:

Bearings are astronomic and are referred to the meridian through the South East corner of Lot 13, Concession 5, Township of Moore. (Longitude 82° 19' 43\" W.)

E.C. Brisco
ONTARIO LAND SURVEYOR.

E. C. BRISCO JR.		
ONTARIO LAND SURVEYOR		CHATHAM, ONT.
FOR TECUMSEH GAS STORAGE LIMITED		
PLAN OF SURVEY SHOWING PART OF LOT 28, CONCESSION 1 TOWNSHIP OF DAWN COUNTY OF LAMBTON		
DRAWN R.S.	DATE DEC. 6, 1963.	APPROVED
CHECKED	SCALE 1" = 100'	I.O.L. DWG. N ^o
DWG. N ^o FILE		

PROPERTY PLAN N^o 5

TECUMSEH GAS STORAGE LIMITED
A COMPANY INCORPORATED UNDER THE LAWS OF THE PROVINCE OF ONTARIO

AGREEMENT FOR RIGHT-OF-WAY AND EASEMENT

I (~~WE~~),

of **R.R. #1, Wilkesport**
in the Province of Ontario, hereunder called the "Grantor", being registered as owner of an estate in fee simple in possession (as joint tenants and not as tenants in common) or entitled to become registered as owner of such an estate under an Agreement for Sale or unregistered transfer or otherwise, subject however, to such encumbrances, liens and interests as are notified by memorandum underwritten or endorsed hereon, in all that certain parcel or tract of land and premises situate in the **Township of Dawn**, in the **County of Lambton** and Province of Ontario and being ~~comprised of~~ **more particularly described in page attached hereto marked "B" hereinafter referred to as "the said lands"**.

in consideration of the sum of **Twenty-five** DOLLARS (\$ **25.00**) of lawful money of Canada now paid to the Grantor, the receipt whereof is hereby acknowledged, does hereby agree to sell, grant and convey to Tecumseh Gas Storage Limited, a company empowered to construct and operate pipelines and having its office in the City of Toronto, Province of Ontario, hereinafter called the "Company", a right-of-way and easement free of encumbrance, except for an existing right-of-way and easement in favour of the Company in substantially the same form and substance of the Agreement for Right-of-Way and Easement attached hereto and marked "A" for the construction and operation of one gas pipeline and appurtenances, being a right-of-way and easement fifty feet (50') in width, on, over, under and/or through the said lands for the sum of **One Thousand** DOLLARS (\$ **1,000.00**) per acre of such right-of-way and easement.

The said sum of **Twenty-five** DOLLARS (\$ **25.00**) paid on or before execution of this agreement is to be applied on the said purchase price, the balance of which shall be paid to the Grantor on the date of completion as hereinafter defined.

And the Grantor covenants and agrees that the Grantor will forthwith upon the request of the Company execute and deliver to the Company the said agreement for right-of-way and easement and further execute such other and further documents of title in respect of the said right-of-way and easement as may be reasonably required by the Company.

And the Grantor covenants and agrees that the Company shall forthwith have the immediate right to enter upon the said lands and the Grantor's lands abutting thereto and place its equipment thereon and to commence the construction of its said pipeline and works in accordance with the terms of the said agreement for right-of-way and easement, but subject to any requirements of the law in that regard.

And it is further understood and agreed that the amount payable herein in respect of the said right-of-way and easement shall be paid to the Grantor, or those otherwise interested in the said lands by encumbrance or otherwise, conditional upon the said right-of-way and easement being free of any charge or encumbrance, except for the existing right-of-way and easement in favour of the Company, which condition is for the sole benefit of the Company and may be waived by it at any time.

~~And~~ ~~the wife of the Grantor hereby agrees to execute this agreement for right-of-way and easement for the purpose of having her name thereon~~

And it is further understood and agreed that the Company shall have the absolute right to assign this agreement and all rights, privileges and benefits accruing to it hereunder and upon such assignment the Company shall no longer be liable for the provisions hereof.

And this agreement shall not, nor shall anything herein contained, affect or prejudice the Company's statutory rights to acquire the said lands or any other portion or portions of the lands of the Grantor, which rights may be exercised at the Company's discretion in the event of the Grantor being unable or unwilling for any reason to carry out the terms hereof or give to the Company a clear and unencumbered title to the said right-of-way and easement except for the existing agreement of right-of-way and easement in favour of the Company.

And this agreement shall be conditional upon compliance with the provisions of all applicable legislation including The Planning Act and The Ontario Energy Board Act and the Company hereby agrees that it will, at its own expense, use its best efforts forthwith to make all necessary applications and obtain all approvals required by such legislation.

And the transaction contemplated hereby shall be completed on the earlier of the following dates (which earlier date is herein called the "date of completion")

- (i) the 30th day of December, 1977 and
- (ii) the twentieth (20th) business day immediately following the expiry of any appeal period subsequent to the approval hereof under the provisions of The Ontario Energy Board Act.

In the event that such transaction is not completed on or prior to the 30th day of December, 1977 through no fault of either party hereto, then this agreement shall be null and void and any money paid hereunder shall be returned to the Company without interest or deduction.

And this agreement, including all rights, privileges and benefits herein contained, shall extend to and be binding upon and enure to the benefit of the heirs, executors, administrators, successors and assigns of the Grantor and the Company respectively; and wherever the singular or masculine is used, it shall be construed as if the plural or the feminine or the neuter, as the case may be, had been used, where the context or the party or parties hereto so acquire and the rest of the sentence shall be construed as if the grammatical and terminological changes thereby rendered necessary has been made.

IN WITNESS WHEREOF the Parties have executed this Agreement.



(name)
 on the 30 day of September, 1976
RR #1 Wilkesport
 (address)

SIGNED, SEALED AND DELIVERED

in the presence of

James T. Duster

(name)
 on the _____ day of _____, 1976
 (address)

(name)
 on the _____ day of _____, 1976
 (address)

TECUMSEH GAS STORAGE LIMITED

By [Signature]
VICE PRESIDENT

[Signature]
SECRETARY

on the 6 day of December, 1976



AFFIDAVIT AS TO AGE AND MARITAL STATUS

I/WE Archibald McGregor
of the Township of Sombra
in the County of Lambton
make oath and say: When I executed the attached instrument,

* If attorney see footnote

I/WE was at least eighteen years old.

Strike out inapplicable clauses.

I was ~~married / divorced /~~ widower.
~~was my wife / husband~~

~~We were married to each other.~~

Resident of Canada, etc.

~~We held the land as Joint Tenants / Trustees / Partnership Property.~~

(SEVERALLY) SWORN before me at the Township of Sombra in the County of Lambton

this 30 day of September 19 76.

James T. Dustan
JAMES T. DUSTAN, a Commissioner, etc.,
A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

AFFIDAVIT AS TO AGE AND MARITAL STATUS

I/WE
of the
in the
make oath and say: When executed the attached instrument,

* If attorney see footnote

I/WE at least eighteen years old.

Strike out inapplicable clauses.

I was married / divorced / widower.
was my wife / husband.

We were married to each other.

Resident of Canada, etc.

We held the land as Joint Tenants / Trustees / Partnership Property.

(SEVERALLY) SWORN before me at the

this day of 19

A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

AFFIDAVIT OF SUBSCRIBING WITNESS

I, **James T. Dustan**
of the **Borough of North York**
in the **Municipality of Metropolitan Toronto**

make oath and say:

* See footnote I am a subscribing witness to the attached instrument and I was present and saw it executed
at **R.R.# 1, Wilkesport** by

* See footnote I verily believe that each person whose signature I witnessed is the party of the same name referred to in the instrument.

SWORN before me at the **Borough of North York in the Municipality of Metropolitan Toronto** } *James T. Dustan*
this **30** day of **November** 19**76**

Wm J Coldicott
A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.
WILLIAM J. COLDICOTT, a Commissioner, etc.,
Province of Ontario, for the CONSUMER'S GAS
COMPANY and its Subsidiary Companies.
EXPIRES 22nd September 1979.

AFFIDAVIT OF SUBSCRIBING WITNESS

I,
of the
in the

make oath and say:

* See footnote I am a subscribing witness to the attached instrument and I was present and saw it executed
at by

* See footnote I verily believe that each person whose signature I witnessed is the party of the same name referred to in the instrument.

SWORN before me at the
this day of 19

A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

"B"

DESCRIPTION OF PART OF LOT 28

CONCESSION 1

TOWNSHIP OF DAWN

COUNTY OF LAMBTON

ALL AND SINGULAR that certain parcel or tract of land, situate, lying and being in the Township of Dawn, County of Lambton, and Province of Ontario, being composed of part of Lot 28, Concession 1, in the said Township and being more particularly described as follows:-

COMMENCING at a point in the Southerly limit of the said Lot 28, distant one thousand six hundred and twenty-seven and two tenths feet (1627.2') measured Easterly from the South West angle of the said lot;

THENCE North $36^{\circ} 16' 30''$ West, eight hundred and thirteen and four tenths feet (813.4');

THENCE North $37^{\circ} 28'$ West, one thousand six hundred and twenty and nine one-hundredths feet (1620.09);

THENCE North $34^{\circ} 15' 20''$ West, one hundred and fifty-eight and twenty-five one-hundredths feet (158.25') to a point in the Northerly limit of the said lot;

THENCE Easterly along the said Northerly limit, sixty-two and eighty-two one-hundredths feet (62.82') to a point;

THENCE South $34^{\circ} 16' 20''$ East, one hundred and eighteen and eighty-two one-hundredths feet (118.82') to a point;

THENCE South $37^{\circ} 28'$ East, one thousand six hundred and twelve and one tenth feet (1612.1') to a point;

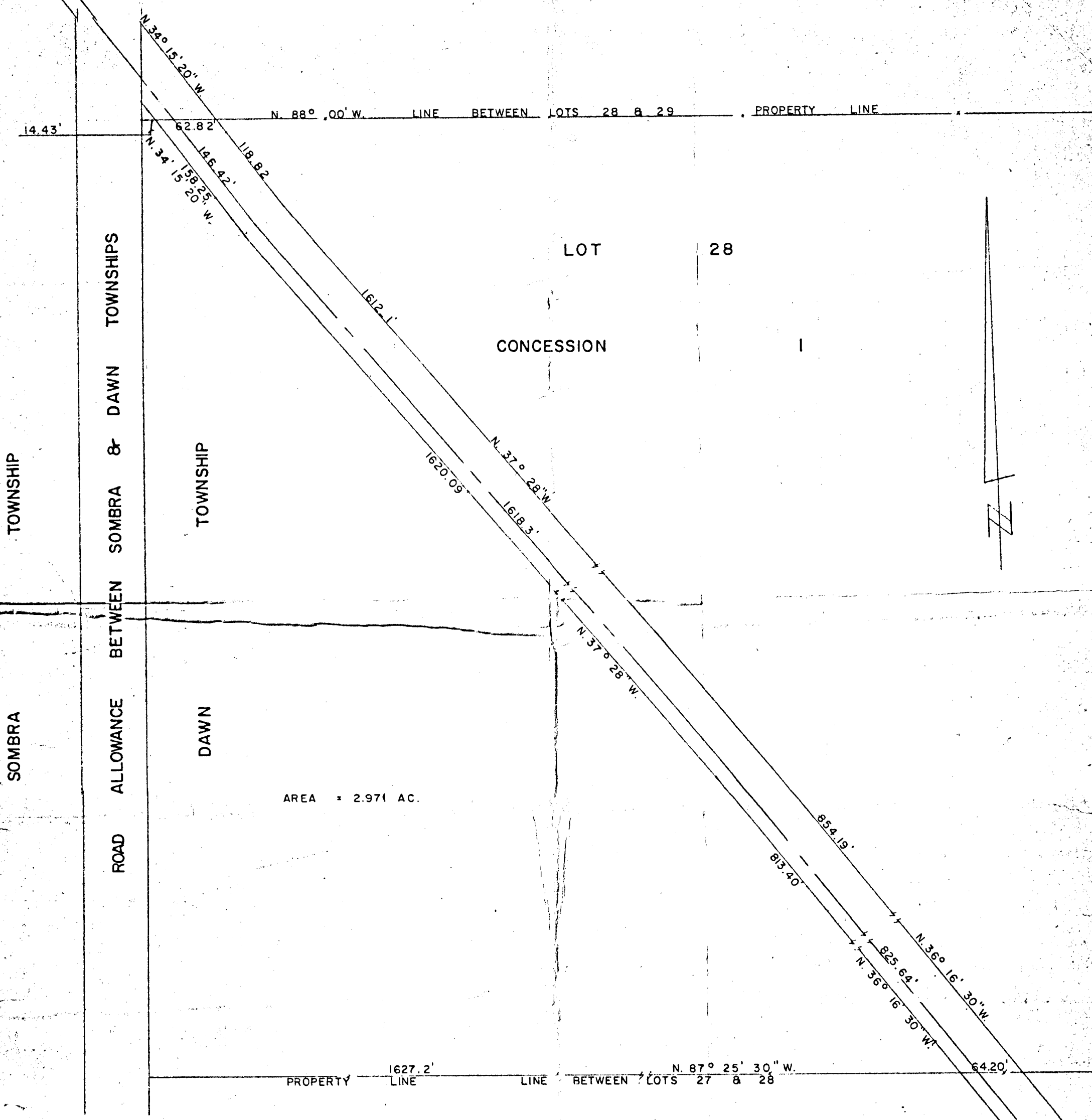
THENCE South $36^{\circ} 16' 30''$ East, eight hundred and fifty-four and nineteen one-hundredths feet (854.19') to a point in the Southerly limit of the said lot;

THENCE Westerly along the last mentioned limit, sixty-four and twenty one-hundredths feet (64.20') to the Point of Commencement.

The above described land comprise an area of 2.971 Acres.

PROPERTY PLAN--

--30 INCH GAS TRANSMISSION LINE



NOTE:
 Bearings are astronomic and are referred to the meridian through the South East corner of Lot 13, Concession 5, Township of Moore. (Longitude 82° 19' 43" W.)

E. C. Brisco Jr.
 ONTARIO LAND SURVEYOR.

E. C. BRISCO JR.		
ONTARIO LAND SURVEYOR		CHATHAM, ONT.
FOR TECUMSEH GAS STORAGE LIMITED		
PLAN OF SURVEY SHOWING PART OF LOT 28, CONCESSION 1 TOWNSHIP OF DAWN COUNTY OF LAMBTON		
DRAWN R.S.	DATE DEC. 6, 1963.	APPROVED
CHECKED	SCALE 1" = 100'	L.O.L. DWG. N ^o
DWG. N ^o FILE		

L402741

“A”

TECUMSEH GAS STORAGE LIMITED

GRANT OF EASEMENT

THIS INDENTURE made the _____ day of _____, 19____

IN PURSUANCE OF THE SHORT FORMS OF CONVEYANCES ACT

BETWEEN:

(hereinafter called the “Grantor”)
OF THE FIRST PART

AND

TECUMSEH GAS STORAGE LIMITED, a company incorporated under the laws of Ontario with head office at the City of Toronto, in the Municipality of Metropolitan Toronto,

(hereinafter called the “Grantee”)
OF THE SECOND PART

AND

wife (wives) of the Grantor.

OF THE THIRD PART

AND

(hereinafter called the “Mortgagee”)
OF THE FOURTH PART

AND

OF THE FIFTH PART

WHEREAS the Grantor is the registered owner of the following lands and premises (hereinafter referred to as “the Grantor’s lands”) in the Township of _____ in the County of _____ and Province of Ontario, namely:

AND WHEREAS the Mortgagee is the registered holder of a mortgage or charge affecting the Grantor’s lands (and the part of the Fifth Park has a claim against same or interest therein);

WITNESSETH that in consideration of the sum of TWO DOLLARS (\$2.00) of lawful money of Canada now paid by the Grantee to the Grantor, the receipt of which is hereby acknowledged, and of other good and valuable consideration, the Grantor (and the Mortgagee and/or the Party of the Fifth Part) do hereby grant, convey, transfer and confirm unto the Grantee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands of the Grantee described in Schedule "A" hereto, the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Grantor's lands fifty feet (50') in width as more particularly described in Schedule "B" hereto (hereinafter referred to as "the said lands") to survey, lay, construct, maintain, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use, and/or operate a pipeline for the transmission of natural and/or manufactured gas (hereinafter referred to as "the said pipeline") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Grantee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the said 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, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:

1. The rights, privileges and easement hereby granted shall continue in perpetuity or until the Grantee shall execute and deliver a surrender thereof.
2. The Grantee shall make to the Grantor (or the person or persons entitled thereto) due compensation for any physical damages resulting from the exercise of any of the rights herein granted and, if the compensation is not agreed upon by the Grantee and the Grantor, it shall be determined in the manner prescribed by The Ontario Energy Board Act, R.S.O. 1970, Chapter 312, or any Act passed in amendment thereof or substitution therefor. Any gates, fences and tile drains interfered with by the Grantee shall be restored by the Grantee at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Grantee, and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.
3. The said pipeline (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 8 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the said lands nor ordinary cultivation of the said lands nor any tile drainage system existing in the said lands at the time of installation of the said pipeline nor any planned tile drainage system to be laid in the said lands in accordance with standard drainage practice, if the Grantee is given notice of such planned system prior to the installation of the said pipeline; provided that the Grantee may leave the said 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.
4. As soon as reasonably practicable after the construction of the said pipeline, the Grantee shall level the said lands and unless otherwise agreed to by the Grantor, shall remove all debris therefrom and in all respects restore the said lands to their former state so far as is practical, save and except for items in respect of which compensation is due under Clause 2 hereof.
5. In the event that the Grantee fails to comply with any of the requirements set out in Clauses 2, 3 or 4 hereof within a reasonable time of the receipt of notice in writing from the Grantor setting forth the failure complained of, the Grantee shall compensate the Grantor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure.
6. Except in case of emergency, the Grantee shall not enter upon any lands of the Grantor, other than the said lands, without the consent of the Grantor. In case of emergency the right of entry upon the Grantor's lands for ingress and egress to and from the said lands is hereby granted.
7. The Grantor shall have the right to fully use and enjoy the said lands, except as may be necessary for any of the purposes hereby granted to the Grantee, provided that without the prior written consent of the Grantee, the Grantor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the said lands any tree, pit, well, foundation, pavement, building or other structure or installation. Notwithstanding the foregoing, the Grantee, upon request, shall consent to the Grantor erecting or repairing fences, constructing or repairing his tile drains and domestic sewer pipes, water pipes and utility pipes and constructing or repairing his lanes, roads, driveways, pathways and walks across, on and in the said lands or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Grantor shall (a) give the Grantee at least five (5) clear days notice in writing pointing out the work desired so as to enable the Grantee 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 said 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 said pipeline.
8. 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 said lands any valves and/or take-offs and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Grantee shall pay to the Grantor (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, R.S.O. 1970, Chapter 312, or any Act passed in amendment thereof or substitution therefor. The Grantee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the said lands.
9. Notwithstanding any rule of law or equity and even though the said pipeline and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Grantee.
10. Neither this agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Grantee's rights to acquire the said lands or any other portion or portions of the Grantor's lands under the provisions of The Ontario Energy Board Act, R.S.O. 1970, Chapter 312 or any other laws, which rights the Grantee may exercise at its discretion in the event of the Grantor being unable or unwilling for any reason to perform this agreement or give to the Grantee a clear and unencumbered title to the easement herein granted.
11. The Grantor 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 Grantee may at its expense prepare and that the Grantee, 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 Grantor is not the sole owner of the said lands, this Indenture shall nevertheless bind the Grantor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all monies payable hereunder shall be paid to the Grantor only in the proportion that his interest in the said lands bears to the entire interest therein.

12. In the event that the Grantee shall be in default hereunder, the Grantor shall give the Grantee notice of such default and the Grantee shall immediately upon receipt of such notice take reasonable steps to rectify such default.

13. All payments under these presents may be made either in cash or by cheque of the Grantee and may be made to the Grantor (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 Grantor and Grantee at the addresses noted below or to such other address in either case as the Grantor or the Grantee, respectively, may from time to time appoint in writing.

14. 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.

And the said wife (wives) of the Grantor(s) hereby bar(s) dower in the said lands.

And the Mortgagee and the Party of the Fifth Part covenant that the Grantee shall have quiet possession of the rights, privileges and easement hereby granted, in priority to their interests in the said lands.

IN WITNESS WHEREOF the Parties hereto have executed and delivered this Indenture as of the date and year first above written.

SIGNED, SEALED AND DELIVERED

in the presence of

Name _____
Address _____

Name _____
Address _____

TECUMSEH GAS STORAGE LIMITED

By _____ C/S

55 Adelaide Street West
Toronto, Ontario M5C 1K6

SCHEDULE "A"

In the Township of Moore, in the County of Lambton and Province of Ontario and being composed of the north twenty (20) acres of the east quarter of Lot Nineteen (19) in Concession Seven (7) of the said Township, which may be more particularly described as follows:

PREMISING that the bearings herein are astronomic and are referred to the meridian through the southeast corner of Lot Thirteen (13) in the Fifth (5th) Concession of the Township of Moore (longitude $82^{\circ} 19' 43''$ W) and relating all bearings herein thereto:

COMMENCING at the northeast angle of said Lot Nineteen (19); thence north eighty-eight degrees forty minutes west ($N 88^{\circ} 40' W$) along the north limit of said Lot Nineteen (19) a distance of four hundred and ninety-three point six feet (493.6') to the northwest angle of the east quarter of said Lot Nineteen (19); thence south one degree, thirty-nine minutes twenty seconds west ($S 1^{\circ} 39' 20'' W$) along the line between the east one-quarter and the west three-quarters of Lot Nineteen (19) aforesaid, a distance of one thousand seven hundred and sixty-five point zero feet (1,765.0') to a point where a standard iron bar has been planted; thence south eighty-eight degrees forty minutes east ($S 88^{\circ} 40' E$) parallel to the north limit of said Lot Nineteen (19) a distance of four hundred and ninety-three point six feet (493.6') to a point in the east limit of said Lot Nineteen (19) where a standard iron bar has been planted; thence north one degree thirty-nine minutes twenty seconds east ($N 1^{\circ} 39' 20'' E$) along the east limit of said Lot Nineteen (19) a distance of one thousand seven hundred and sixty-five point zero feet (1,765.0') to the POINT OF COMMENCEMENT.

THE PLANNING ACT

I, _____ of the _____

in the _____

DO SOLEMNLY DECLARE THAT

1. I am the _____ of TECUMSEH GAS STORAGE LIMITED, Grantee 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 TECUMSEH GAS STORAGE LIMITED for the construction of a transmission line as defined in The Ontario Energy Board Act.

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 _____)
_____)
_____)
in the _____)
_____)
_____)
this _____ day of _____, 1976.)

A commissioner, etc.

12

IN THE MATTER OF SUBSECTION 3 OF SECTION 5 OF
THE LAND SPECULATION TAX ACT, 1974

Affidavit

I, of

(print name)

.....

(print address)

MAKE OATH AND SAY THAT:

1. I verily believe that the disposition of designated land evidenced in the attached instrument or writing is exempt from the tax imposed by subsection 1 of section 2 of the above Act by virtue of the disposition being:

describe nature of disposition

the granting of an easement or right-of-way in, over or upon designated land for the purpose of a public utility.

Ontario Regulation 505/74
as provided for by section _____, clause _____, subclause _____ of the above Act.

delete this paragraph if inapplicable

2. I am the transferor making the disposition referred to in paragraph 1 hereof. Since the acquisition of my interest in the designated land that is referred to in paragraph 1 hereof and that is being disposed of to the transferee named in the attached instrument or writing, no disposition with respect to such designated land has occurred prior to the disposition to the said transferee.

delete this paragraph if inapplicable

3. ~~I am authorized in writing by the transferor making the disposition referred to in paragraph 1 hereof to make this affidavit. Since the acquisition of the interest of the transferor in the designated land that is referred to in paragraph 1 hereof and that is being disposed of to the transferee named in the attached instrument or writing, no disposition with respect to such designated land has occurred prior to the disposition to the said transferee.~~

Sworn before me at the

of

in the

of

this

day of

19

A Commissioner, etc.

THE LAND TRANSFER TAX ACT, 1974

Affidavit of Residence

IN THE MATTER OF THE CONVEYANCE OF _____

(insert brief description of land)

TO TECUMSEH GAS STORAGE LIMITED
(insert names of all transferees)

I, _____ of _____
(print name and address)

MAKE OATH AND SAY THAT:

1. I am (place a clear mark within the square opposite that one of the following paragraphs that describes the capacity of the deponent):
- (a) A person to whom or in trust for whom the land conveyed in the above-described conveyance is being conveyed;
 - (b) One of the trustees named in the above-described conveyance to whom the land is being conveyed;
 - (c) A transferee named in the above-described conveyance;
 - (d) An agent authorized in writing to act for _____ who is a person
(insert name of principal)
described in paragraph _____ above *(insert only one of paragraph (a), (b), or (c) above);*
 - (e) The solicitor acting in this matter for TECUMSEH GAS STORAGE LIMITED who is a person
(insert name of client)
described in paragraph (c) above *(insert only one of paragraph (a), (b) or (c) above);*
- and as such, I have personal knowledge of the facts herein deposed to.

2. None of the transferees to whom or in trust for whom the land conveyed in the above-described conveyance is being conveyed is, within the meaning of the Act, a non-resident person (strike out this paragraph if inapplicable).

3. ~~The following persons to whom or in trust for whom the land conveyed in the above-described conveyance is being conveyed are non-resident persons within the meaning of the Act.~~

(insert the name and place of residence – or in the case of a corporation, the place of incorporation – of any transferee who is a non-resident person. If space is insufficient, attach a list of those transferees who are non-resident persons.)

4. I have read over and considered the definitions of "non-resident corporation" and "non-resident person" set out respectively in clause f and g of subsection 1 of section 1 of the Act.

Sworn before me at the
of
in the
of
this
day of 19

A Commissioner, etc.

14

The Land Transfer Tax Act, 1974

AFFIDAVIT OF VALUE OF THE CONSIDERATION

IN THE MATTER OF THE CONVEYANCE made

by:

.....

(identify the parties to the conveyance)

to: TECUMSEH GAS STORAGE LIMITED

.....

on the day of, 19

I,

of the

in the

MAKE OATH AND SAY THAT:

This affidavit may be made by the purchaser or vendor or by any one acting for them under power of attorney or by an agent accredited in writing by the purchaser or vendor or by the solicitor of either of them or by some other person approved by the Minister of Revenue.

1. I am named in the within (or annexed) conveyance.

2. I have a personal knowledge of the facts stated in this affidavit.

3. (1) The total consideration for this transaction has been allocated as follows:

(a) Land, buildings, fixtures and goodwill	\$
(b) Chattels — items of tangible personal property - (see note)	\$ nil

TOTAL CONSIDERATION

(2) The true consideration for the transfer or conveyance for Land Transfer Tax purposes is as follows:

(a) Monies paid in cash	\$ nil
(b) Property transferred in exchange (Detail below)	\$ nil
(c) Securities transferred to the value of (Detail below)	\$ nil
(d) Balances of existing encumbrances with interest owing at date of transfer	\$ nil
(e) Monies secured by mortgage under this transaction	\$ nil
(f) Liens, legacies, annuities and maintenance charges to which transfer is subject	\$ nil
(g) Other (Detail below)	\$ nil

TOTAL CONSIDERATION (should agree with 3 (1) (a) above)

4. If consideration is nominal, is the transfer for natural love and affection? No

5. If so, what is the relationship between Grantor and Grantee? N/A

6. Other remarks and explanations, if necessary Exempt from land transfer tax under Ontario Regulation 749/74

.....
.....
.....

SWORN before me at the

of

in the

this day 19

A COMMISSIONER FOR TAKING AFFADAVITS, ETC.

All blanks must be filled in.

NOTE TO PARAGRAPH 3(1)(b): Chattels: Retail sales tax is payable on the valuation of items shown in 3 (1) (b) unless otherwise exempted under the provisions of The Retail Sales Tax Act R.S.O. 1970 C415 as amended. For the purpose of this affidavit insert above only the value of chattels, the total value of which in the opinion of the deponent exceeds \$100.00. This does not exonerate a purchaser from the payment of Retail Sales Tax on any tangible personal property as part of this transaction. When chattels are purchased as part of this transaction, with value of less than \$100.00, the applicable tax should be paid by the purchaser to the Treasurer of Ontario and remitted to the Minister of Revenue.

TECUMSEH GAS STORAGE LIMITED
A COMPANY INCORPORATED UNDER THE LAWS OF THE PROVINCE OF ONTARIO.

GRANT OF EASEMENT

THIS INDENTURE made the 25th day of August, 1977
IN PURSUANCE OF THE SHORT FORMS OF CONVEYANCES ACT
BETWEEN:

(hereinafter called the "Grantor")
OF THE FIRST PART

AND

TECUMSEH GAS STORAGE LIMITED, a company incorporated under the laws of Ontario with head office at the City of Toronto, in the Municipality of Metropolitan Toronto,

(hereinafter called the "Grantee")
OF THE SECOND PART

~~AND~~

~~TECUMSEH GAS STORAGE LIMITED~~

~~OF THE SECOND PART~~

*Rep
P. H. H. H. H.*

AND

(hereinafter called the "Mortgagee")
OF THE FOURTH PART

AND

OF THE FIFTH PART

WHEREAS the Grantor is the registered owner of the following lands and premises (hereinafter referred to as "the Grantor's lands") in the Township of Dawn in the County of Lambton and Province of Ontario, namely:
The west one half of Lot 28, Concession 1

AND WHEREAS the Mortgagee is the registered holder of a mortgage or charge affecting the Grantor's lands (and the party of the Fifth Part has a claim against same or interest therein);

WITNESSETH that in consideration of the sum of TWO DOLLARS (\$2.00) of lawful money of Canada now paid by the Grantee to the Grantor, the receipt of which is hereby acknowledged, and of other good and valuable consideration, the Grantor (and the Mortgagee and/or the Party of the Fifth Part) do hereby grant, convey, transfer and confirm unto the Grantee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands of the Grantee described in Schedule "A" hereto, the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Grantor's lands fifty feet (50') in width as more particularly described in Schedule "B" hereto (hereinafter referred to as "the said lands") to survey, lay, construct, maintain, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use, and/or operate a pipeline for the transmission of natural and/or manufactured gas (hereinafter referred to as "the said pipeline") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Grantee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the said 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, privileges and easement hereby granted. The Parties hereto mutually covenant and agree each with the other as follows:

1. The rights, privileges and easement hereby granted shall continue in perpetuity or until the Grantee shall execute and deliver a surrender thereof.
2. The Grantee shall make to the Grantor (or the person or persons entitled thereto) due compensation for any physical damages resulting from the exercise of any of the rights herein granted and, if the compensation is not agreed upon by the Grantee and the Grantor, it shall be determined in the manner prescribed by The Ontario Energy Board Act, R.S.O. 1970, Chapter 312, or any Act passed in amendment thereof or substitution therefor. Any gates, fences and tile drains interfered with by the Grantee shall be restored by the Grantee at its expense as closely as reasonably practicable to the condition in which they existed immediately prior to such interference by the Grantee, and in the case of tile drains, such restoration shall be performed in accordance with good drainage practice.
3. The said pipeline (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 8 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the said lands nor ordinary cultivation of the said lands nor any tile drainage system existing in the said lands at the time of installation of the said pipeline nor any planned tile drainage system to be laid in the said lands in accordance with standard drainage practice, if the Grantee is given notice of such planned system prior to the installation of the said pipeline; provided that the Grantee may leave the said 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.
4. As soon as reasonably practicable after the construction of the said pipeline, the Grantee shall level the said lands and unless otherwise agreed to by the Grantor, shall remove all debris therefrom and in all respects restore the said lands to their former state so far as is practical, save and except for items in respect of which compensation is due under Clause 2 hereof.
5. In the event that the Grantee fails to comply with any of the requirements set out in Clauses 2, 3 or 4 hereof within a reasonable time of the receipt of notice in writing from the Grantor setting forth the failure complained of, the Grantee shall compensate the Grantor (or the person or persons entitled thereto) for any damage, if any, necessarily resulting from such failure.
6. Except in case of emergency, the Grantee shall not enter upon any lands of the Grantor, other than the said lands, without the consent of the Grantor. In case of emergency the right of entry upon the Grantor's lands for ingress and egress to and from the said lands is hereby granted.
7. The Grantor shall have the right to fully use and enjoy the said lands, except as may be necessary for any of the purposes hereby granted to the Grantee, provided that without the prior written consent of the Grantee, the Grantor shall not excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the said lands any tree, pit, well, foundation, pavement, building or other structure or installation. Notwithstanding the foregoing, the Grantee, upon request, shall consent to the Grantor erecting or repairing fences, constructing or repairing his tile drains and domestic sewer pipes, water pipes and utility pipes and constructing or repairing his lanes, roads, driveways, pathways and walks across, on and in the said lands or any portion or portions thereof, provided that before commencing any of the work referred to in this sentence the Grantor shall (a) give the Grantee at least five (5) clear days notice in writing pointing out the work desired so as to enable the Grantee 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 said 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 said pipeline.
8. 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 said lands any valves and/or take-offs and to fence in such valves and/or take-offs and to keep same fenced in, but for this right the Grantee shall pay to the Grantor (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, R.S.O. 1970, Chapter 312, or any Act passed in amendment thereof or substitution therefor. The Grantee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the said lands.
9. Notwithstanding any rule of law or equity and even though the said pipeline and its appurtenances may become annexed or affixed to the realty, title thereto shall nevertheless remain in the Grantee.
10. Neither this agreement nor anything herein contained nor anything done hereunder shall affect or prejudice the Grantee's rights to acquire the said lands or any other portion or portions of the Grantor's lands under the provisions of The Ontario Energy Board Act, R.S.O. 1970, Chapter 312 or any other laws, which rights the Grantee may exercise at its discretion in the event of the Grantor being unable or unwilling for any reason to perform this agreement or give to the Grantee a clear and unencumbered title to the easement herein granted.
11. The Grantor 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 Grantee may at its expense prepare and that the Grantee, 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 Grantor is not the sole owner of the said lands, this Indenture shall nevertheless bind the Grantor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all monies payable hereunder shall be paid to the Grantor only in the proportion that his interest in the said lands bears to the entire interest therein.

12. In the event that the Grantee shall be in default hereunder, the Grantor shall give the Grantee notice of such default and the Grantee shall immediately upon receipt of such notice take reasonable steps to rectify such default.

13. All payments under these presents may be made either in cash or by cheque of the Grantee and may be made to the Grantor (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 Grantor and Grantee at the addresses noted below or to such other address in either case as the Grantor or the Grantee, respectively, may from time to time appoint in writing.

14. 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.

And the said wife (wives) of the Grantor(s) hereby bar(s) dower in the said lands.

And the Mortgagee and the Party of the Fifth Part covenant that the Grantee shall have quiet possession of the rights, privileges and easement hereby granted, in priority to their interests in the said lands.

IN WITNESS WHEREOF the Parties hereto have executed and delivered this Indenture as of the date and year first above written.

SIGNED, SEALED AND DELIVERED

in the presence of

James T. Dunstan

R. R. # 1 Wilkesport

Address

Name

Address

APPROVED

[Signature]
LAND DEPT
TECUMSEH GAS

TECUMSEH GAS STORAGE UNIT

By

[Signature]
Kathrine Parkinson
SECRETARY

P O. Box 650,
Scarborough, Ont.
M1K 5E3



SCHEDULE "A"

In the Township of Moore, in the County of Lambton and Province of Ontario and being composed of the north twenty (20) acres of the east quarter of Lot Nineteen (19) in Concession Seven (7) of the said Township, which may be more particularly described as follows:

PREMISING that the bearings herein are astronomic and are referred to the meridian through the southeast corner of Lot Thirteen (13) in the Fifth (5th) Concession of the Township of Moore (longitude $82^{\circ} 19' 43''$ W) and relating all bearings herein thereto:

COMMENCING at the northeast angle of said Lot Nineteen (19); thence north eighty-eight degrees forty minutes west ($N 88^{\circ} 40' W$) along the north limit of said Lot Nineteen (19) a distance of four hundred and ninety-three point six feet (493.6') to the northwest angle of the east quarter of said Lot Nineteen (19); thence south one degree, thirty-nine minutes twenty seconds west ($S 1^{\circ} 39' 20'' W$) along the line between the east one-quarter and the west three-quarters of Lot Nineteen (19) aforesaid, a distance of one thousand seven hundred and sixty-five point zero feet (1,765.0') to a point where a standard iron bar has been planted; thence south eighty-eight degrees forty minutes east ($S 88^{\circ} 40' E$) parallel to the north limit of said Lot Nineteen (19) a distance of four hundred and ninety-three point six feet (493.6') to a point in the east limit of said Lot Nineteen (19) where a standard iron bar has been planted; thence north one degree thirty-nine minutes twenty seconds east ($N 1^{\circ} 39' 20'' E$) along the east limit of said Lot Nineteen (19) a distance of one thousand seven hundred and sixty-five point zero feet (1,765.0') to the POINT OF COMMENCEMENT.

SCHEDULE "B"

the
between

to the Grant of Easement dated
25th day of August 1977 .

and

Tecumseh Gas Storage Limited

ALL AND SINGULAR that certain parcel or tract of land, situate, lying and being in the Township of Dawn, County of Lambton, and Province of Ontario, being composed of part of Lot 28, Concession 1, in the said Township and being more particularly described as follows:-

COMMENCING at a point in the Southerly limit of the said Lot 28, distant one thousand six hundred and twenty-seven and two tenths feet (1627.2') measured Easterly from the South West angle of the said lot;

THENCE North $36^{\circ} 16' 30''$ West, eight hundred and thirteen and four tenths feet (813.4');

THENCE North $37^{\circ} 28'$ West, one thousand six hundred and twenty and nine one-hundredths feet (1620.09');

THENCE North $34^{\circ} 15' 20''$ West, one hundred and fifty-eight and twenty-five one-hundredths feet (158.25') to a point in the Northerly limit of the said lot;

THENCE Easterly along the said Northerly limit, sixty-two and eighty-two one-hundredths feet (62.82') to a point;

THENCE South $34^{\circ} 16' 20''$ East, one hundred and eighteen and eighty-two one-hundredths feet (118.82') to a point;

THENCE South $37^{\circ} 28'$ East, one thousand six hundred and twelve and one tenth feet (1612.1') to a point;

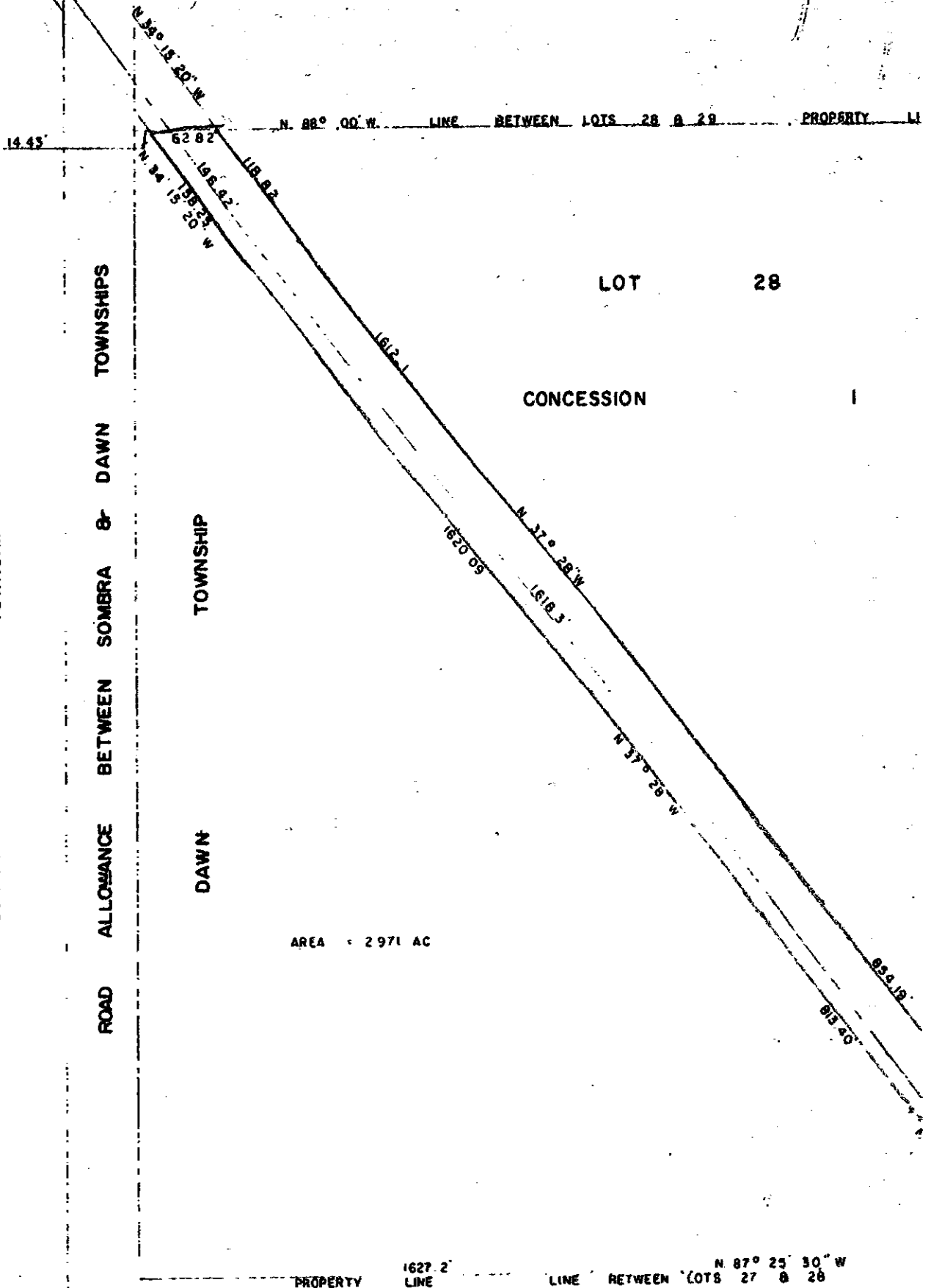
THENCE South $36^{\circ} 16' 30''$ East, eight hundred and fifty-four and nineteen one-hundredths feet (854.19') to a point in the Southerly limit of the said lot;

THENCE Westerly along the last mentioned limit, sixty-four and twenty one-hundredths feet (64.20') to the Point of Commencement.

The above described land comprise an area of 2.971 Acres.

PROPERTY PLAN

36 INCH GAS TRANSMISSION LINE



NOTE:

Bearings are astronomic and are referred to the meridian through the South East corner of Lot 13, Concession 5, Township of Moore. (Longitude 82° 19' 43" W.)

E.
ONTARIO LAND SURV
TECHN.
PLAN

PROPERTY PLAN

--30 INCH GAS TRANSMISSION LINE

N. 88° 00' W. LINE BETWEEN LOTS 28 & 29 PROPERTY LINE

LOT 28

CONCESSION

AREA = 2.971 AC.

PROPERTY LINE 1627.2' N. 87° 25' 30" W LINE BETWEEN LOTS 27 & 28

NOTE:

Bearings are astronomic and are referred to the meridian through the South East corner of Lot 13, Concession 5, Township of Moore. (Longitude 82° 19' 43" W.)

E. C. BRISCO JR.	
ONTARIO LAND SURVEYOR	CHATHAM, ONT.
FOR	
TEGUMSEH GAS STORAGE LIMITED	
PLAN OF SURVEY SHOWING	

SOMBRA

ROAD ALLOWANCE BETWEEN

DAWN

AREA = 2971 AC

PROPERTY

1627 2'
LINE

LINE BETWEEN

N 87° 25' 30" W
LOTS 27 & 28

NOTE:

Bearings are Astronomic and are referred to the meridian through the South West corner of Lot 13, Concession 5, Township of Moore. (Longitude 82° 19' 43" W.)

E. C. Bri
ONTARIO LAND SURVEYOR.

E. C. BRI	
ONTARIO LAND SURVEYOR	
TCUMSHI GAS STN	
PLAN OF SURVEY	
PART OF LOT 28,	
TOWNSHIP 0	
COUNTY OF	
DRAWN R.S.	DATE DEC. 6,
CHECKED	SCALE 1" =
DWG. NO. FILE	

PROPERTY

AREA = 2 971 AC

PROPERTY LINE 1627 2'

LINE BETWEEN LOTS 27 & 28 N. 87° 25' 30" W

NOTE:

Bearings are astronomic and are referred to the meridian through the South East corner of Lot 13, Concession 5, Township of Moore. (Longitude 82° 19' 43" W.)

E. C. BRISCO JR.	
ONTARIO LAND SURVEYOR	CHATHAM, ONT.
FOR TECUMSEH GAS STORAGE LIMITED	
PLAN OF SURVEY SHOWING PART OF LOT 28, CONCESSION 1 TOWNSHIP OF DAWN COUNTY OF LANDBON	
DRAWN R.S.	DATE DEC. 6, 1963.
CHECKED	SCALE 1" = 100'
OWN. # FILE	APPROVED LO. & O.W. #

PROPERTY PLAN N° 5

THE PLANNING ACT

(Katherine E. Parkinson of the City of Toronto

in the Municipality of Metropolitan Toronto

DO SOLEMNLY DECLARE THAT

1. I am the **Secretary** of **TECUMSEH GAS STORAGE LIMITED**. Grantee 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 **TECUMSEH GAS STORAGE LIMITED** for the construction of a transmission line as defined in The Ontario Energy Board Act.

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 City of Toronto)

in the Municipality of Metropolitan Toronto)

this 31st day of August 1978)

Judy Craig
A commissioner, etc.

Katherine E. Parkinson
Katherine E. Parkinson

JUDY CRAIG, a Commissioner, etc.,
Judicial District of York, for
the Consumers' Gas Company and its
subsidiary companies.
Expires June 23, 1980.

IN THE MATTER OF SUBSECTION 3 OF SECTION 5 OF
THE LAND SPECULATION TAX ACT, 1974

Affidavit

I, _____ of R. R. #1
(print name)
Wilkesport, Ontario
(print address)

MAKE OATH AND SAY THAT:

1. I verily believe that the disposition of designated land evidenced in the attached instrument or writing is exempt from the tax imposed by subsection 1 of section 2 of the above Act by virtue of the disposition being:

describe
nature of
disposition

the granting of an easement or right-of-way in, over or upon designated land for the purpose of a public utility.

Ontario Regulation 505/74
as provided for by section _____, clause _____, subclause _____ of the above Act.

delete this
paragraph if
inapplicable

2. I am the transferor making the disposition referred to in paragraph 1 hereof. Since the acquisition of my interest in the designated land that is referred to in paragraph 1 hereof and that is being disposed of to the transferee named in the attached instrument or writing, no disposition with respect to such designated land has occurred prior to the disposition to the said transferee.

delete this
paragraph if
inapplicable

3. ~~I am authorised in writing by the transferor making the disposition referred to in paragraph 1 hereof to make this affidavit. Since the acquisition of the interest of the transferor in the designated land that is referred to in paragraph 1 hereof and that is being disposed of to the transferee named in the attached instrument or writing, no disposition with respect to such designated land has occurred prior to the disposition to the said transferee.~~

Sworn before me at the Township


of Sombra

in the County

of Lambton

this 25th

day of August 19 77


JAMES T. DUSTAN, c Commissioner, etc.,
Province of Ontario, Expiry 27 Nov. 1977.
A Commissioner, etc.

Affidavit of Residence

IN THE MATTER OF THE CONVEYANCE OF a Grant of Easement in, over, under and
through part of Lot 28, Concession 1, Township of Dawn, County of Lambton
 (Insert brief description of land)

TO TECUMSEH GAS STORAGE LIMITED
 (Insert names of all transferees)

I, Katherine E. Parkinson of The City of Toronto
 (print name and address)
in the Municipality of Metropolitan Toronto

MAKE OATH AND SAY THAT:

1. I am (place a clear mark within the square opposite that one of the following paragraphs that describes the capacity of the deponent):

- (a) A person to whom or in trust for whom the land conveyed in the above-described conveyance is being conveyed;
- (b) One of the trustees named in the above-described conveyance to whom the land is being conveyed;
- (c) A transferee named in the above-described conveyance;

(d) An agent authorized in writing to act for _____ who is a person
 (insert name of principal)
 described in paragraph _____ above (insert only one of paragraph (a), (b), or (c) above);

(e) The solicitor acting in this matter for TECUMSEH GAS STORAGE LIMITED who is a person
 (insert name of client)
 described in paragraph (c) above (insert only one of paragraph (a), (b) or (c) above);

and as such, I have personal knowledge of the facts herein deposed to.

2. None of the transferees to whom or in trust for whom the land conveyed in the above-described conveyance is being conveyed is, within the meaning of the Act, a non-resident person (strike out this paragraph if inapplicable).

3. ~~The following persons to whom or in trust for whom the land conveyed in the above-described conveyance is being conveyed are non-resident persons within the meaning of the Act.~~

(Insert the name and place of residence - or in the case of a corporation, the place of incorporation - of any transferee who is a non-resident person. If space is insufficient, attach a list of those transferees who are non-resident persons.)

4. I have read over and considered the definitions of "non-resident corporation" and "non-resident person" set out respectively in clause f and g of subsection 1 of section 1 of the Act.

Sworn before me at the City
 of Toronto
 in the Municipality
 of Metropolitan Toronto
 this 31st
 day of August 19 77

Katherine E. Parkinson
 Katherine E. Parkinson

Judy Craig
 A Commissioner, etc.

JUDY CRAIG, a Commissioner, etc.
 Judicial District of York, for
 the Consumers' Gas Company and its
 subsidiary companies
 Expires June 23, 1980.

The Land Transfer Tax Act, 1974

AFFIDAVIT OF VALUE OF THE CONSIDERATION

IN THE MATTER OF THE CONVEYANCE made

by:

(Identify the parties to the conveyance)

to: TECUMSEH GAS STORAGE LIMITED

on the 25th day of August, 19 77

1. Katherine E. Parkinson

of the City of Toronto

in the Municipality of Metropolitan Toronto

MAKE OATH AND SAY THAT:

This affidavit may be made by the purchaser or vendor or by any one acting for them under power of attorney or by an agent accredited in writing by the purchaser or vendor or by the solicitor of either of them or by some other person approved by the Minister of Revenue.

1. I am Secretary of the Grantee named in the within (or annexed) conveyance.

2. I have a personal knowledge of the facts stated in this affidavit.

3. (1) The total consideration for this transaction has been allocated as follows:

(a) Land, buildings, fixtures and goodwill	\$2971.00
(b) Chattels — items of tangible personal property - (see note)	\$ nil
TOTAL CONSIDERATION	\$2971.00

(2) The true consideration for the transfer or conveyance for Land Transfer Tax purposes is as follows:

(a) Monies paid in cash	\$2971.00
(b) Property transferred in exchange (Detail below)	\$ nil
(c) Securities transferred to the value of (Detail below)	\$ nil
(d) Balances of existing encumbrances with interest owing at date of transfer	\$ nil
(e) Monies secured by mortgage under this transaction	\$ nil
(f) Liens, legacies, annuities and maintenance charges to which transfer is subject	\$ nil
(g) Other (Detail below)	\$ nil
TOTAL CONSIDERATION (should agree with 3 (1) (a) above)	\$2971.00

All blanks must be filled in.

APPROVED

RC

LAND DEPT
TECUMSEH GAS

4. If consideration is nominal, is the transfer for natural love and affection? No

5. If so, what is the relationship between Grantor and Grantee? N/A

6. Other remarks and explanations, if necessary Exempt from land transfer tax under Ontario Regulation 749/74

SWORN before me at the City
of Toronto
in the Municipality of Metropolitan Toronto

this 31st day August, 19 77

Katherine E. Parkinson
Katherine E. Parkinson

A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.
JUDY CRAIG, a Commissioner, etc.,
Judicial District of York, for
the Consumers' Gas Company and its
subsidiary companies.
Expires June 23, 1980.

NOTE TO PARAGRAPH 3(1)(b): Chattels: Actual sales tax is payable on the value of items shown in 3(1)(b) unless otherwise exempted under the provisions of The Retail Sales Tax Act (R.S.O. 1970-C415 as amended). For the purpose of this affidavit insert above only the value of chattels, the total value of which in the opinion of the deponent exceeds \$100.00. This does not exempt a purchaser from the payment of Retail Sales Tax on any tangible personal property as part of this transaction. When chattels are purchased as part of this transaction, with value of less than \$100.00, the applicable tax should be paid by the purchaser to the Treasurer of Ontario and remitted to the Minister of Revenue.

AFFIDAVIT AS TO AGE AND MARITAL STATUS

I/WE

of the Township of Sombra
in the County of Lambton

make oath and say: When I executed the attached instrument.

* If attorney
see footnote

I/WE was at least eighteen years old.

I was ~~never married~~ widower.

Strike out
inapplicable
clauses.

~~was my wife / husband.~~

~~We were married to each other.~~

Resident of
Canada, etc

~~We hold the land as Joint Tenants / Trustees / Partnership Property~~
I am not a non-resident of Canada within the meaning of
Section 116 of the Income Tax Act of Canada.

(SEVERALLY) SWORN before me at the Township
of Sombra in the County of Lambton

this 25th day of August 1977



JAMES T. DUSTAN, a Commissioner, etc.,
A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

AFFIDAVIT AS TO AGE AND MARITAL STATUS

I/WE

of the
in the

make oath and say: When executed the attached instrument.

If attorney
see footnote

I/WE at least eighteen years old.

I was married / divorced / widower.

Strike out
inapplicable
clauses.

was my wife / husband.

We were married to each other.

We held the land as Joint Tenants / Trustees / Partnership Property

Resident of
Canada, etc

(SEVERALLY) SWORN before me at the

this day of 19

A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

AFFIDAVIT OF SUBSCRIBING WITNESS

I, James T. Dustan
of the Borough of North York
in the Municipality of Metropolitan Toronto

make oath and say:

* See footnote I am a subscribing witness to the attached instrument and I was present and saw it executed
at R. R. #1 Wilkesport by

* See footnote I verily believe that each person whose signature I witnessed is the party of the same name referred to in the instrument.

SWORN before me at the Borough of
North York in the Municipality
of Metropolitan Toronto

this 29th day of August 19 77


James T. Dustan


Plaintiff

A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

RICHARD LANGSTAFF, a Commissioner etc.,
Province of Ontario, Expiry 29 Sept., 1979.

AFFIDAVIT OF SUBSCRIBING WITNESS

I,
of the
in the

make oath and say:

* See footnote I am a subscribing witness to the attached instrument and I was present and saw it executed
at by

* See footnote I verily believe that each person whose signature I witnessed is the party of the same name referred to in the instrument

SWORN before me at the

this day of 19



A COMMISSIONER FOR TAKING AFFIDAVITS, ETC.

423081

DATED 25 AUGUST 1977

PROPERTY OF THE
REGISTRY OFFICE

LAND REGISTRY OFFICE #25

177 OCT 20 AM 10 33

TECUMSEH GAS STORAGE
LIMITED

P.O. Box 650
Scarborough, Ont.
M1K 5E3

GRANT OF EASEMENT

TECUMSEH GAS STORAGE LIMITED
P.O. Box 650,
Scarborough, Ont.
M1K 5E3.

GAVILLER

423081

No. Land Registry Division of Lambton (No 25)
I CERTIFY that this instrument is registered as of

10:35 A.M. in the
Land Registry Office at Sarnia, Ontario.

OCT 20 1977

Ann Dan LAND REGISTRAR

Dawn E

11.00



Document General

Form 4 — Land Registration Reform Act, 1984

D

<p style="text-align: right;">1995 FEB - 1 11:13:02</p> <p style="text-align: center; font-size: 24pt;">763900</p> <p>NUMBER _____</p> <p>CERTIFICATE OF REGISTRATION</p> <p style="text-align: center; font-size: 18pt;">FEB - 1 1995</p> <p>LAMBTON North SAHNIA</p> <p style="text-align: right;"><i>Ken Dean</i> LAND REGISTRAR</p> <p>New Property Identifiers Additional: See Schedule <input type="checkbox"/></p> <p>Executions Additional: See Schedule <input type="checkbox"/></p>	<p>(1) Registry <input checked="" type="checkbox"/> Land Titles <input type="checkbox"/> (2) Page 1 of 10 pages 1/17</p>	<p>(3) Property Identifier(s) Block Property Additional: See Schedule <input type="checkbox"/></p>
	<p>(4) Nature of Document</p> <p style="text-align: center; font-size: 18pt;">AGREEMENT</p>	
	<p>(5) Consideration</p> <p>ONE THOUSAND-----Dollars \$ 1,000.00</p>	
	<p>(6) Description</p> <p>In the Township of Dawn, in the County of Lambton and being composed of the west half of Lot 28, Concession 1.</p>	
	<p>(7) This Document Contains: (a) Redescription New Easement Plan/Sketch <input type="checkbox"/> (b) Schedule for: Description <input checked="" type="checkbox"/> Additional Parties <input type="checkbox"/> Other <input checked="" type="checkbox"/></p>	

(8) This Document provides as follows:

Agreement attached.

Continued on Schedule

(9) This Document relates to instrument number(s) **761618**

(10) Party(ies) (Set out Status or Interest)	Signature(s)	Date of Signature
Name(s)		Y M D
THE CONSUMERS' GAS COMPANY LTD.		
BY IT'S AGENT ANISSA TRENHOLM	<i>Anissa Trenholm</i>	1995 01 23
(Beneficiary of Agreement)		

(11) Address for Service **P.O. Box 650, Scarborough, Ontario M1K 5E3**

(12) Party(ies) (Set out Status or Interest)	Signature(s)	Date of Signature
Name(s)		Y M D
		1995 01 16
		1995 01 16
		1995 01 16

(13) Address for Service **R.R.#1 Wilkesport, Ontario NOP 2R0**

<p>(14) Municipal Address of Property</p> <p>not assigned</p> <p>shells/6035(1256/LAND.1)</p>	<p>(15) Document Prepared by:</p> <p>The Consumers' Gas Company Ltd. Attn: Land Dept. (L-21766) P.O. Box 650 Scarborough, Ontario M1K 5E3</p> <p style="text-align: center;">(Registry Front)</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">Fees and Tax</th> </tr> <tr> <td style="width:50%;">Registration Fee</td> <td style="width:50%; text-align: center;">50</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td>Total</td> <td> </td> </tr> </table>	Fees and Tax		Registration Fee	50			Total	
Fees and Tax										
Registration Fee	50									
Total										

FOR OFFICE USE ONLY

FOR OFFICE USE ONLY

10174 (12/94) Rev 11 (08/1) 08/95

Additional Property Identifier(s) and/or Other Information

AGREEMENT TO GRANT EASEMENT AND RIGHT-OF-WAY

THIS AGREEMENT made this 16th day of JANUARY 1995 .

AMONG

... of Ontario,
(hereinafter called the "Transferor")
OF THE FIRST PART

- and -

THE CONSUMERS' GAS COMPANY LTD., a Corporation
incorporated under the laws of the Province of Ontario,
(hereinafter called the "Transferee")
OF THE SECOND PART

- and -

Spouse of the Transferor,
(hereinafter called the "Spouse")
OF THE THIRD PART

- and -

(hereinafter called the "Mortgagee")
OF THE FOURTH PART

WHEREAS the Transferor is the registered owner in fee simple in possession, subject to the encumbrances, liens and interests in favour of the Mortgagee, of all that certain parcel or tract of land and premises (hereinafter called the "Transferor's Land") situate, lying and being in the Township of Dawn, in the County of Lambton and Province of Ontario and being composed of the west half of Lot 28, Concession 1.

FOR OFFICE USE ONLY



Schedule

Form 5 — Land Registration Reform Act, 1984

3 of 10

Page

S

Additional Property Identifier(s) and/or Other Information

AND WHEREAS the Transferor has agreed to grant to the Transferee an easement over a part of the Transferor's Lands, such part being 8 metres in width (hereinafter called the "Easement Lands").

WITNESSETH that in consideration of the sum of ONE THOUSAND DOLLARS (\$1,000) of lawful money of Canada now paid by the Transferee to the Transferor, the receipt whereof is hereby acknowledged, the Transferor does hereby agree to sell, transfer, grant and convey in perpetuity to the Transferee an unencumbered easement in, under and/or through the Easement Lands to survey, lay, construct, operate, use, inspect, remove, renew, replace, alter, reconstruct, repair, and maintain one (1) pipeline only not to exceed NPS 16 inches in diameter (hereinafter called the pipeline) and all works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment which the Transferee may deem necessary or convenient in connection with its use of the Easement Lands together with a right-of-way with access from the road allowance to the Transferee, its successors, assigns, servants and agents on foot and/or with the vehicles, supplies, machinery and equipment. In the event that the easement is not adjacent to a road allowance the Transferee, its successors, assigns, servants and agents agree to use the most direct route as close as practicable to a property limit to access the Easement lands. The purchase price of the said transfer of easement and right-of-way contemplated herein shall be calculated at the rate of TWO THOUSAND, FIVE HUNDRED DOLLARS (\$2,500.00) per acre applied to the area of the Easement Lands arrived at by a certified Ontario Land Surveyor.

Notwithstanding anything to the contrary contained in this agreement, any renewal, replacement, alteration or reconstruction to be performed on the pipeline shall be limited to a section or sections of the pipeline initially installed pursuant to this agreement. The parties hereto mutually covenant and agree each with the other as follows:

(1) The location of the Easement Lands shall be selected by the Transferee, provided that the location shall not unreasonably interfere with the use by the Transferor of the remainder of the Transferor's Lands during the construction of a pipeline or at any time thereafter.

(2) The Transferor shall, forthwith upon the request of the Transferee, execute and deliver a grant or transfer of easement and right-of-way in favour of the Transferee, in the form attached hereto as Schedule "B" together with such other and further documents of title in respect of the Transferor's Lands as may be reasonably required by the Transferee in order to complete the transaction contemplated by this agreement.

(3) The Transferee shall pay the purchase price of the said transfer of easement and right-of-way to the Transferor upon registration or as soon as reasonably possible after the registration thereof in the appropriate Land Registry Office.

(4) Forthwith upon the execution of this agreement, the Transferee, its servants and agents shall be entitled to enter upon the Easement Lands and the Transferor's Lands to survey, lay, construct, operate, use, inspect, remove, renew, replace, alter, reconstruct, repair, and maintain the pipeline including all necessary works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment which the Transferee may deem necessary or convenient with the right to the Transferee to remove any boulder or rock, and to sever, fell, remove or control the growth of any roots, trees, stumps, brush or other vegetation on or under the Transferor's Lands which may be encountered during such construction.

(5) As soon as reasonably possible after the construction of a pipeline, the Transferee shall remove all surplus soil and debris from the Transferor's Lands and restore them to their former state so far as is reasonably practicable in accordance with the Letter of Understanding dated July 28, 1994.

(6) The Transferor shall have the right to use and enjoy the surface of the Easement Lands except that such use and enjoyment shall not interfere with the rights of the Transferee hereunder. Without limiting the generality of the foregoing, the Transferor shall not without prior written consent of the Transferee place or erect, or cause to be placed or erected, on the Easement Lands any building, structure or fence and shall not excavate, drill, alter the grading, install thereon any pit, well, foundation and/or pavement which will obstruct or prevent the exercise and enjoyment by the Transferee of the easement and right-of-way which the Transferor hereby agrees to sell, grant and convey to the Transferee.

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SM 15/6035(1256/LAND.3)

Additional Property Identifier(s) and/or Other Information

(7) Notwithstanding any rule of law or equity, any pipeline constructed by the Transferee hereunder together with all works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment shall be deemed to be the property of the Transferee, even though the same may have become annexed or affixed to the Transferor's Lands.

(8) This agreement shall be conditional upon compliance with the provisions of the Planning Act and the Ontario Energy Board Act. The Transferor agrees to execute such consents or authorizations as may be necessary for the Transferee to obtain any necessary consents from the local Land Division Committee and agrees to co-operate in any such applications for consent.

(9) This agreement shall be of the same force and effect as a covenant running with the Transferor's Lands and the rights hereunder shall be appurtenant to the lands of the Transferee more particularly described in the attached Schedule "A".

(10) The Spouse consents to the transaction evidenced by this instrument and releases all interest in the within lands pursuant to the provisions of the Family Law Act, R.S.O. 1990, as amended, and hereby agrees to execute for such purpose the grant or transfer of easement and right-of-way contemplated hereby.

The Transferor, spouses of each other, consent to the transaction evidenced by this instrument and release all interest in the within lands pursuant to the provisions of the Family Law Act, R.S.O. 1990, as amended.

(11) The Mortgagee hereby consents to the within agreement and postpones its rights in the Transferor's Lands (including the Easement Lands) to the rights of the Transferee. The Mortgagee agrees to execute, for such purpose, a registerable postponement agreement to the grant or transfer of easement and right-of-way contemplated hereby.

(12) This agreement shall extend to, be binding upon and enure to the benefit of the respective heirs, executors, administrators, successors and assigns of the parties hereto.

(13) The transaction contemplated hereby shall be completed on the the following date:

(i) December 31, 1996

(14) The Transferee will, at all times, wholly and completely indemnify and save harmless the Transferor, his agents and employees from and against all loss, damage, claim, liability, injury or expense arising by reason of any damage or injury to any person or property caused by the construction, repair, maintenance, operation or other activity on, over, under or through the said lands, including imprudence, neglect or want of skill by the employees or agents of the Transferee arising out of construction, repair, maintenance, operation or other activity by the Transferee or any of its agents or employees. The Transferee further agrees to indemnify the Transferor from such losses, damages, claims, liabilities, injuries or expenses resulting from the gross negligence or wilful misconduct of the Transferee or his agents or employees.

The Transferor agrees to indemnify the Transferee from and against any and all loss, damage, claim, liability, injury or expense resulting from the negligence or wilful misconduct of the Transferor or his agents or employees.

Additional Property Identifier(s) and/or Other Information

WITNESS WHEREOF, the parties hereto have executed this agreement.

SIGNED, SEALED AND DELIVERED in the presence of

Attestation
Attestation
Attestation

THE CONSUMERS' GAS COMPANY LTD.

E. H. Erwin

E. H. ERWIN
DIRECTOR, FACILITIES MANAGEMENT

APPROVED

W. J. [Signature]

W. J. [Signature]
MANAGER, GAS

R. Langstaff

RICHARD LANGSTAFF
MANAGER, LAND

WE HAVE THE AUTHORITY TO BIND THE CORPORATION

FOR OFFICE USE ONLY

s/6035(1256/LAND.5)

Additional Property Identifier(s) and/or Other Information

DOMINANT TENEMENT

SCHEDULE "A"

to the Agreement dated
the 15th 16th day of JANUARY 1995,

between

and

The Consumers' Gas Company Ltd.

TRANSFeree'S LANDS

In the Township of Moore, in the County of Lambton and Province of Ontario and being composed of the north twenty (20) acres of the east quarter of Lot Nineteen (19) in Concession Seven (7) of the said Township which may be more particularly described as follows:

PREMISING that the bearings herein are astronomic and are referred to the meridian through the southeast corner of Lot Thirteen (13) in the Fifth (5th) Concession of the Township of Moore (longitude 82° 19' 43" W) and relating all bearings herein thereto:

COMMENCING at the northeast angle of said Lot Nineteen (19): thence north eighty-eight degrees forty minutes west (N 88° 40' W) along the north limit of said Lot Nineteen (19) a distance of four hundred and ninety-three point six feet (493.6') to the northwest angle of the east quarter of said Lot Nineteen (19): thence south one degree thirty-nine minutes twenty seconds west (S 1° 39' 20" W) along the line between the east one-quarter and the west three-quarters of Lot Nineteen (19) aforesaid a distance of one thousand seven hundred and sixty-five point zero feet (1,765.0') to a point where a standard iron bar has been planted: thence south eighty-eight degrees forty minutes east (S 88° 40' E) parallel to the north limit of said Lot Nineteen (19) a distance of four hundred and ninety-three point six feet (493.6') to a point in the east limit of said Lot Nineteen (19) where a standard iron bar has been planted: thence north one degree thirty-nine minutes twenty seconds east (N 1° 39' 20" E) along the east limit of said Lot Nineteen (19) a distance of one thousand seven hundred and sixty-five point zero feet (1,765.0') to the POINT OF COMMENCEMENT.

TRANSFEROR'S LANDS

REGISTRY OFFICE
TORONTO

s/6035(1256/LAND.6)



Transfer/Deed of Land

Form 1 — Land Registration Reform Act, 1984

A

FOR OFFICE USE ONLY	(1) Registry <input type="checkbox"/> Land Titles <input type="checkbox"/>	(2) Page 7 of 10 pages
	(3) Property Identifier(s) Block Property	Additional: See Schedule <input type="checkbox"/>
	(4) Consideration Dollars \$	
	(5) Description This is a: Property Division <input type="checkbox"/> Property Consolidation <input type="checkbox"/>	
New Property Identifiers Additional: See Schedule <input type="checkbox"/>		
Executions Additional: See Schedule <input type="checkbox"/>		

(6) This Document Contains	(a) Redescription New Easement Plan/Sketch <input type="checkbox"/>	(b) Schedule for: Description <input type="checkbox"/> Additional Parties <input type="checkbox"/> Other <input type="checkbox"/>	(7) Interest/Estate Transferred Free Simple Easement and Right-of-Way
----------------------------	---	---	---

(8) Transferor(s) The transferor hereby transfers the land to the transferee and certifies that the transferor is at least eighteen years old and that

Name(s)	Signature(s)	Date of Signature Y M D

(9) Spouse(s) of Transferor(s) I hereby consent to this transaction

Name(s)	Signature(s)	Date of Signature Y M D

(10) Transferor(s) Address for Service

(11) Transferee(s)

THE CONSUMERS' GAS COMPANY LTD. Per: _____ Signature Date M D

Per: _____

(12) Transferee(s) Address for Service P.O. Box 650, Scarborough, Ontario M1K 5E3

(13) Transferor(s) The transferor verifies that to the best of the transferor's knowledge and belief, this transfer does not contravene section 49 of the Planning Act, 1983.

Date of Signature Y M D	Signature	Date of Signature Y M D

Signature _____

Solicitor for Transferor(s) I have explained the effect of section 49 of the Planning Act, 1983 to the transferor and I have made inquiries of the transferor to determine that this transfer does not contravene that section and based on the information supplied by the transferor, to the best of my knowledge and belief, this transfer does not contravene that section. I am an Ontario solicitor in good standing.

Name and Address of Solicitor	Signature	Date of Signature Y M D

(14) Solicitor for Transferee(s) I have investigated the title to this land and to abutting land where relevant and I am satisfied that the title records reveal no contravention as set out in subclause 49 (21a) (c) (ii) of the Planning Act, 1983 and that to the best of my knowledge and belief this transfer does not contravene section 49 of the Planning Act 1983. I act independently of the solicitor for the transferor(s) and I am an Ontario solicitor in good standing.

Name and Address of Solicitor	Signature	Date of Signature Y M D

(15) Assessment Roll Number of Property	Cty. Mun. Map Sub. Par.	(16) Municipal Address of Property	(17) Document Prepared by: The Consumers' Gas Company Ltd. Land Department (L-) P.O. Box 650 Scarborough, Ontario M1K 5E3
			FOR OFFICE USE ONLY
			Fees and Tax
			Registration Fee
			Land Transfer Tax
			Total



Schedule

Form 5 - Land Registration Reform Act, 1984

Page 8 of 10

S

Additional Property Identifier(s) and/or Other Information

INTEREST/ESTATE TRANSFERRED

1. The Transferors hereby transfer, sell, grant and convey in perpetuity to the Transferee, its successors and assigns, a free and unencumbered easement in, under and/or through the lands described in Box 5 on page 1 hereof (the "Easement Lands") to survey, lay, construct, operate, use, inspect, remove, renew, replace, alter, reconstruct, repair, and maintain one (1) pipeline only not to exceed NPS 16 inches in diameter (hereinafter called the pipeline) and all works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment which the Transferee may deem necessary or convenient in connection with its use of the easement lands together with a right-of-way with access from the road allowance to the Transferee, its successors, assigns, servants and agents on foot and/or with vehicles, supplies, machinery and equipment. In the event that the easement is not adjacent to a road allowance the Transferee, its successors, assigns, servants and agents agree to use the most direct route as close as practicable to a property limit to access the Easement lands.

1(a). Notwithstanding anything to the contrary contained in this agreement, any renewal, replacement, alteration or reconstruction to be performed on the pipeline shall be limited to a section or sections of the pipeline initially installed pursuant to this agreement.

2. The Transferee shall have the right at any time and from time to time to remove any boulder or rock and to sever, fell, remove or control the growth of any roots, trees, stumps, brush or other vegetation on or under the Easement Lands.

3. The rights of the Transferee herein shall be of the same force and effect as a covenant running with the Easement Lands and shall be appurtenant to the lands and premises described in this Schedule as the Transferee's Lands.

4. The Transferee shall have the absolute and unfettered right to assign or transfer its rights hereunder in whole or in part and shall not be bound to give notice thereof to any party.

5. This Transfer shall extend to, be binding upon and enure to the benefit of the respective heirs, executors, administrators, successors and assigns of the parties hereto. If the Transferors are not the sole owners of the said lands, this Transfer shall bind the Transferors to the full extent of their interest therein and shall also extend to any after-acquired interest but all monies payable or paid to the Transferors hereunder shall be paid to the Transferors only in the proportion that their interest in the said lands bears to the entire interest therein. The Transferors hereby agree that all provisions herein are reasonable and valid and if any provision herein is determined to be unenforceable, in whole or in part, it shall be severable from all other provisions and shall not affect or impair the validity of all other provisions.

6. The Transferors shall have the right to use and enjoy the surface of the Easement Lands except that such use and enjoyment shall not interfere with the rights of the Transferee hereunder. Without limiting the generality of the foregoing, the Transferors shall not without the prior written consent of the Transferee, place or erect on the Easement Lands any building, structure or fence and shall not excavate, alter the grading, drill, install thereon any pit, well, foundation and/or pavement which will obstruct or prevent the exercise and enjoyment by the Transferee of its rights hereunder.

7. Notwithstanding any rule of law or equity, any pipeline constructed by the Transferee together with all works, appurtenances, attachments, apparatus, appliances, markers, fixtures and equipment shall be deemed to be the property of the Transferee even though the same may have become annexed or affixed to the Easement Lands.

8. The Transferee shall at its own expense as soon as reasonably possible after the construction of its pipeline or other exercise of its rights hereunder, remove all surplus soil and debris from the Easement Lands and

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/6035) 1256/LAND.8)

Additional Property Identifier(s) and/or Other Information

restore them to their former state so far as is reasonably practicable in accordance with the Letter of Understanding dated July 28, 1994.

9. The Transferors covenant that

(i) they have the right to convey this easement and right-of-way to the Transferee;

(ii) the Transferee shall have quiet enjoyment of the rights, easement and right-of-way hereby transferred;

(iii) the Transferors or their successors and assigns will execute such further assurances of this easement and right-of-way and do such other acts (at the Transferee's expense) as may be reasonably required; and

(iv) the Transferors have not done, omitted or permitted anything whereby the Easement Lands is or may be encumbered (except as the records of the land registry office disclose).

10. The Transferor represents and warrants that the Easement Lands have not been used for the storage of and do not contain any toxic, hazardous, dangerous, noxious or waste substances or contaminants (collectively the "Hazardous Substances"). If the Transferee encounters any Hazardous Substances in undertaking any work on the Easement Lands, it shall give notice to the Transferor. At the expense of the Transferor, the Transferee (or, at the Transferee's option, the Transferor) shall effect the removal of such Hazardous Substances in accordance with the laws, rules and regulations of all applicable public authorities. The Transferee shall not bring any Hazardous Substances on the Easement Lands. In acquiring its interests in the Easement Lands pursuant to this Easement, the Transferee shall be deemed not to acquire the care or control of the Easement Lands or any component thereof.

11. The Transferee will, at all times, wholly and completely indemnify and save harmless the Transferor, his agents and employees from and against all loss, damage, claim, liability, injury or expense arising by reason of any damage or injury to any person or property caused by the construction, repair, maintenance, operation or other activity on, over, under or through the said lands, including imprudence, neglect or want of skill by the employees or agents of the Transferee arising out of construction, repair, maintenance, operation or other activity by the Transferee or any of its agents or employees. The Transferee further agrees to indemnify the Transferor from such losses, damages, claims, liabilities, injuries or expenses resulting from the gross negligence or wilful misconduct of the Transferee or his agents or employees.

The Transferor agrees to indemnify the Transferee from and against any and all loss, damage, claim, liability, injury or expense resulting from the negligence or wilful misconduct of the Transferor or his agents or employees.

TRANSFEEE'S LANDS (DOMINANT TENEMENT)

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/6035)1256/LAND.9)

refer to all instructions on reverse side.

IN THE MATTER OF THE CONVEYANCE OF *(insert brief description of land)* The west half of Lot 28, Concession 1,
Township of Dawn, County of Lambton.

BY *(print names of all transferors in full)* _____

TO *(see instruction 1 and print names of all transferees in full)* The Consumers' Gas Company Ltd.

I, *(see instruction 2 and print name(s) in full)* Anissa Trenholm

MAKE OATH AND SAY THAT:

1. I am *(place a clear mark within the square opposite that one of the following paragraphs that describes the capacity of the deponent(s))*: *(see instruction 2)*

- (a) A person in trust for whom the land conveyed in the above-described conveyance is being conveyed;
- (b) A trustee named in the above-described conveyance to whom the land is being conveyed;
- (c) A transferee named in the above-described conveyance;
- (d) The authorized agent ~~of~~ acting in this transaction for *(insert name(s) of principal(s))* The Consumers' Gas Company Ltd.

_____ described in paragraph(s) ~~(a), (b), (c)~~ (c) above; *(strike out references to inapplicable paragraphs)*

(e) The President, Vice-President, Manager, Secretary, Director, or Treasurer authorized to act for *(insert name(s) of corporation(s))* _____

_____ described in paragraph(s) (a), (b), (c) above; *(strike out references to inapplicable paragraphs)*

(f) A transferee described in paragraph () *(insert only one of paragraph (a), (b) or (c) above, as applicable)* and am making this affidavit on my own behalf and on behalf of *(insert name of spouse)* _____ who is my spouse described in paragraph () *(insert only one of paragraph (a), (b) or (c) above, as applicable)* and as such, I have personal knowledge of the facts herein deposed to.

2. *(To be completed where the value of the consideration for the conveyance exceeds \$400,000.)*

I have read and considered the definition of "single family residence" set out in clause 1(1)(j) of the Act. The land conveyed in the above-described conveyance

- contains at least one and not more than two single family residences.
- does not contain a single family residence.
- contains more than two single family residences. *(see instruction 3)*

Note: Clause 2(1)(d) imposes an additional tax at the rate of one-half of one per cent upon the value of consideration in excess of \$400,000 where the conveyance contains at least one and not more than two single family residences.

3. I have read and considered the definitions of "non-resident corporation" and "non-resident person" set out respectively in clauses 1(1)(f) and (g) of the Act and each of the following persons to whom or in trust for whom the land is being conveyed in the above-described conveyance is a "non-resident corporation" or a "non-resident person" as set out in the Act. *(see instructions 4 and 5)* None

4. THE TOTAL CONSIDERATION FOR THIS TRANSACTION IS ALLOCATED AS FOLLOWS:

(a) Monies paid or to be paid in cash	\$ 1,000.00	
(b) Mortgages (i) Assumed <i>(show principal and interest to be credited against purchase price)</i>	\$ nil	
(ii) Given back to vendor	\$ nil	
(c) Property transferred in exchange <i>(detail below)</i>	\$ nil	
(d) Securities transferred to the value of <i>(detail below)</i>	\$ nil	
(e) Liens, legacies, annuities and maintenance charges to which transfer is subject	\$ nil	
(f) Other valuable consideration subject to land transfer tax <i>(detail below)</i>	\$ nil	
(g) VALUE OF LAND, BUILDING, FIXTURES AND GOODWILL SUBJECT TO LAND TRANSFER TAX <i>(Total of (a) to (f))</i>	\$ 1,000.00	\$ 1,000.00
(h) VALUE OF ALL CHATTELS - items of tangible personal property <i>(Retail Sales Tax is payable on the value of all chattels unless exempt under the provisions of the "Retail Sales Tax Act", R.S.O. 1980, c.454, as amended)</i>	\$ nil	
(i) Other consideration for transaction not included in (g) or (h) above	\$ nil	
(j) TOTAL CONSIDERATION	\$ 1,000.00	\$ 1,000.00

All Blanks Must Be Filled In. Insert "Nil" Where Applicable.

5. If consideration is nominal, describe relationship between transferor and transferee and state purpose of conveyance. *(see instruction 8)* N/A

6. If the consideration is nominal, is the land subject to any encumbrance? N/A

7. Other remarks and explanations, if necessary. Exempt from Land Transfer Tax under Section 18 Subsection 1 of the Land Transfer Tax Act R.S.O.

Sworn before me at the City of North York
in the Municipality of Metropolitan Toronto
this 23rd day of January 1995

Marlene Norris-Robinson
A Commissioner for taking Affidavits, etc.
MARLENE ANNE NORRIS-ROBINSON, a Commissioner, etc., Province of Ontario, for The Consumers' Gas Company Ltd., and its subsidiaries, associates and affiliates.
Expires January 8, 1998.

Anissa Trenholm
Anissa Trenholm

Property Information Record
A. Describe nature of instrument. Agreement to Grant Easement
B. (i) Address of property being conveyed *(if available)* N/A
(ii) Assessment Roll No. *(if available)* N/A
C. Mailing address(es) for future Notices of Assessment under the Assessment Act for property being conveyed *(see instruction 7)* Consumers Gas, 500 Consumers Rd., P.O. Box 650 Scarborough, Ontario M1K 5E3 Attention: Land Dept.
D. (i) Registration number for last conveyance of property being conveyed *(if available)* N/A
(ii) Legal description of property conveyed. Same as in D. (i) above. Yes No Not known
E. Name(s) and address(es) of each transferee's solicitor
Aird & Berlis, Barristers & Solicitors, BCE Place, Suite 1800, P.O. Box 754, 181 Bay Street, Toronto, Ontario M5J 2T9 (File No. 1-21766)

For Land Registry Office Use Only	
Registration No.	
Registration Date	Land Registry Office No.

School Tax Support (Voluntary Election) See reverse for explanation

- (a) Are all individual transferees Roman Catholic? Yes No
- (b) If Yes, do all individual transferees wish to be Roman Catholic Separate School Supporters? Yes No
- (c) Do all individual transferees have French Language Education Rights? Yes No
- (d) If Yes, do all individual transferees wish to support the French Language School Board (where established)? Yes No

NOTE: As to (c) and (d) the land being transferred will be assigned to the French Public School Board or Sector unless otherwise directed in (a) and (b).

SHR 11/60/11 (12587/LAND.10)

ATTACHMENT 7



ONTARIO ENERGY BOARD

UNION GAS LIMITED – DAWN PARKWAY 2016 EXPANSION PROJECT

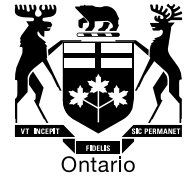
DECISION AND ORDER

EB-2014-0261

April 30, 2015

Ontario Energy
Board

Commission de l'énergie
de l'Ontario



EB-2014-0261

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

AND IN THE MATTER OF an application by Union Gas Limited for an order or orders granting leave to construct natural gas pipeline and ancillary facilities in the City of Hamilton, the City of Burlington, and the Town of Milton;

AND IN THE MATTER OF an application by Union Gas Limited for an order or orders granting leave to construct a compressor station in the Municipality of Middlesex Centre;

AND IN THE MATTER OF an application by Union Gas Limited for an order or orders for pre-approval of the recovery of the cost consequences of all facilities associated with the development of the natural gas pipelines and ancillary facilities and the compressor station.

Before: Marika Hare
Presiding Member

Ellen Fry
Member

2016 Dawn to Parkway Expansion Project Decision and Order

Introduction and Summary

Union Gas Limited (Union) has filed an application with the Ontario Energy Board (OEB) for approval of a major system expansion. This expansion includes a natural gas pipeline, compressor station and related facilities. Union submitted that the expansion

is needed to respond to the request for additional transportation services on the Dawn Parkway pipeline system as a result of changing North American gas supply dynamics.

The Act requires the OEB to consider the public interest when deciding whether to approve the construction of a project such as this. For the reasons set out below, the OEB concludes that the expansion is in the public interest and the project is approved subject to a number of conditions, as specified in this Decision and Order. These include practices to mitigate the impact of the pipeline on the land where it is constructed and also a revision to the form of agreement offered to affected landowners.

The Application

Union has applied for approval under section 90 of the Act to construct 20 kilometers of pipeline and associated facilities from its Hamilton valve site to its Milton valve site, in the City of Hamilton, the City of Burlington, and the Town of Milton. The application also seeks approval, under section 91 of the Act, for the construction of a new compressor (the Lobo C compressor) and modifications to the existing facilities at the Lobo compressor station in the Municipality of Middlesex Centre. The proposed facilities will provide incremental capacity of 442,770 GJ/d on Union's Dawn Parkway pipeline system.

Union has also requested approval under section 36 of the Act to recover the costs of the project from ratepayers and to establish an associated deferral account to record any differences between the actual revenue requirement and the revenue requirement included in rates (2016 Dawn Parkway System Expansion Deferral Account).

Union submitted that the costs of the project meet the capital pass-through criteria previously approved by the OEB¹. All proposed facilities are expected to be in service in November 2016. A map of the project area is attached as Appendix A.

As part of this application, in accordance with section 97 of the Act, the OEB is also required to approve the form of agreement offered to affected landowners.

¹ 2014-2018 Incentive Regulation Mechanism proceeding (EB-2013-0202)

The Process

The proceeding included an interrogatory phase, a settlement process and an oral hearing. There were a number of intervenors who participated in this proceeding, and these parties are listed in Appendix B.

As a result of settlement negotiations a proposed partial settlement agreement was filed on February 27, 2015. All but two issues were settled. The first unsettled issue concerns pipeline abandonment. The second issue concerns what practices should be taken to mitigate the impact on the land where the pipeline is constructed.

Both of these issues were raised by the Gas Pipeline Landowners of Ontario (GAPLO). Union argued that GAPLO is not representative of the landowners affected by this project, because it focuses on agricultural land and the only affected landowner who is a member of GAPLO owns residential property. GAPLO indicated that it represents landowners directly affected by Union's pipelines generally and hence has an interest in ensuring that Union's construction methodologies and environmental protection measures are held to the highest standards by the OEB. The OEB accepted GAPLO as an intervenor in this proceeding because it agrees that GAPLO has an interest.

The Settlement Agreement

During the presentation of the settlement agreement at the hearing on March 5, 2015, the OEB asked Union to clarify certain information. All the parties that endorsed the settlement agreement agreed to the clarifications put forward by Union at the hearing. Union filed an updated settlement agreement incorporating some of these clarifications on March 6, 2015.

Board Findings

In considering whether a proposed project such as this is in accordance with the public interest, the OEB normally considers the following criteria:

- Need and alternatives
- Cost, economic evaluation, and rate impact
- Environmental, technical and safety issues

- Landowner matters including the form of agreement offered to each owner of land affected by the approved route or location

In this proceeding, the OEB also considered whether the project meets the capital pass-through criteria previously approved by the OEB².

The OEB considers that the updated settlement agreement is in the public interest in accordance with the criteria above, subject to the conditions indicated below. This agreement should be interpreted in accordance with Union's comments at the hearing where the OEB sought clarification of a number of items in the original agreement. The approved settlement agreement is attached as Appendix C to this Decision and Order. The OEB will also approve the draft accounting order filed by Union to establish the 2016 Dawn Parkway System Expansion Deferral Account.

The OEB will now address the two outstanding issues referred to above.

Pipeline Abandonment

Union filed a form of easement agreement applicable to all landowners directly impacted by the pipeline location. GAPLO objected to the proposed pipeline abandonment clause (Clause 1) in Union's form of easement agreement.

At issue is whether Union or the landowners should have the authority to decide on whether the pipeline should be left in the ground or removed at the time of abandonment.

Union's proposed clause would give Union the option to remove the pipeline, or not, at the time of abandonment. GAPLO's proposal would give a landowner the option to require that the pipeline be removed at the time of abandonment. GAPLO argued that the absence of regulations concerning pipeline abandonment in Ontario puts landowners at risk for any potential impacts to their land associated with abandoned pipelines that are not removed. GAPLO proposed language to replace Union's proposed Clause 1 which is identical to what was approved by the OEB in the Strathroy to Lobo project³ GAPLO also requested that this provision apply to all pipelines on the Dawn-Trafalgar system.

² 2014-2018 Incentive Regulation Mechanism proceeding (EB-2013-0202)

³ EB-2005-0550

OEB staff suggested that an appropriate approach may be the appointment of a third party independent consultant to determine whether a pipeline should be removed, in accordance with regulatory requirements and standards at the time of abandonment. OEB staff submitted this may be a more balanced approach.

Findings

The OEB agrees with some of the arguments made by both Union and GAPLO. Union argued that it would not be appropriate for the OEB to mandate today what will happen if and when the pipeline is abandoned, which may occur many decades from now. Union took the position that the appropriate time for decisions to be made as to the mode of abandonment should be at the time of abandonment. Union argued that abandonment regulations and practices will undoubtedly evolve and decades from now will be different from today's best practices. Union argued that the issue of abandonment may also be addressed by other jurisdictional authorities, such as the Niagara Escarpment Commission. The OEB agrees with all these points. GAPLO and OEB staff do not disagree with making the decision at the time of abandonment; but disagree with Union on who should make the final determination with respect to the abandonment method. GAPLO also submitted that the OEB approved a form of agreement that gave the landowner authority to decide the method of abandonment in three previous applications to the OEB. At the hearing, Union referred to the National Energy Board's (NEB) abandonment requirements as well as practices of the Ontario Technical Standards and Safety Authority (TSSA).

GAPLO argued that the Ontario regime with respect to pipeline abandonment is quite different from the NEB jurisdiction over pipeline abandonment procedures. GAPLO submitted that in Ontario there is a lack of regulatory oversight on abandonment. In contrast, the NEB approves federal pipeline abandonment plans.

Union argued that, since the OEB Act does not have provisions pertaining to pipeline abandonment, the TSSA Act and Regulation should apply. OEB staff submitted that contrary to Union's submission, there do not appear to be any enforceable provisions dealing with pipeline abandonment. OEB staff disagreed with Union that, "it would be inappropriate and wrong for the Board to step in where the TSSA has the jurisdiction

and is clearly going about exercising it.”⁴ OEB staff provided a TSSA Pipeline Abandonment Checklist (TSSA Checklist) and noted that compliance is not enforceable.

To further support its argument that the TSSA has jurisdiction over abandonment, Union referred to the CSA draft standard Z662 (CSA standard). The CSA standard would require that a pipeline operator develop an abandonment plan which would include the basis for the chosen abandonment method. However, the clause on abandonment has not been adopted at this time given that the CSA standards are currently only in draft form. Union noted that the draft clause specifies that the abandonment plan should be developed with consideration of regulatory requirements, landowner consultation, effects on land, water, roads and railways crossings, current and future land use, safety and environmental damage risks by ground subsidence, soil mixing or contamination, groundwater contamination, erosion, and the creation of water conduits. OEB staff noted that at this time, there is no certainty on whether the CSA draft standards will become an enforceable requirement. GAPLO submitted that the TSSA does not have exclusive jurisdiction over pipeline abandonment that would preclude the OEB from addressing the issue. Union did not dispute that.

The OEB agrees with GAPLO and OEB staff’s position that there is no enforceable requirement to obtain regulatory approval on the abandonment method.

The OEB agrees with the parties that the TSSA does not have exclusive jurisdiction over pipeline abandonment.

The overriding consideration for the OEB is the control the landowner should have with respect to how the land is to be treated upon pipeline abandonment. The OEB heard evidence from Union that leaving an abandoned pipeline in place would be less disruptive to the land than removing it. The OEB also heard evidence from GAPLO that this might be true over the short term, but that over the longer term impacts such as subsidence could be more disruptive if the pipeline were not removed. GAPLO witnesses testified that for agricultural land the condition of the land is fundamental. Their testimony indicated that this is not just a question of a farmer’s passion for the land; it is that the condition of the land is fundamental to the farmer’s livelihood.

The OEB finds that the landowner should have the right to decide whether an abandoned pipeline should be physically removed from the ground or dealt with through whatever other means of abandonment may be proposed by Union. Once construction

⁴ OEB staff submission, March 11,2015, page 3.

of a pipeline on a piece of property is approved, the landowner is giving up certain rights to Union, as a distribution utility, in the public interest. However, should that pipeline no longer be needed, the landowner should be able to make the fundamental decision about how the land is to be restored.

This is not a debate about deciding in advance what should be done with a pipeline that is abandoned at a point potentially decades from now. The issue is who should make the decision at that time.

The OEB also notes that, as pointed out by GAPLO, the OEB approved a form of agreement that gave the landowner authority to decide the method of abandonment in three previous applications to the OEB.⁵

Given the fact that any pipeline abandonment could occur many years in the future, the OEB finds that the abandonment rights are best incorporated in an easement agreement, which will be registered on the land title and hence readily accessible regardless of the passage of time.

While the OEB is approving GAPLO's request in this proceeding, the OEB does not accept GAPLO's submission that the OEB should address in this proceeding the issue of abandonment for all pipelines on the Dawn-Trafalgar system. The OEB's decision in this proceeding is limited to the lands affected by the specific project for which Union is seeking approval.

Construction and Land Restoration Practices

Union filed as part of the settlement agreement a proposed Letter of Understanding to be entered into with affected landowners. This agreement specifies Union's commitments to adhere to certain construction and land restoration practices. Union and GAPLO agreed upon a number of construction and land restoration practices prior to the hearing. However, GAPLO proposed that the OEB order specific changes to the Letter of Understanding on matters where Union and GAPLO disagreed.

In advance of the oral hearing, GAPLO filed a table setting out the changes requested to the Letter of Understanding⁶. The changes proposed by GAPLO were essentially the

⁵ EB-2005-0550, EB-2007-0633 and EB-2009-0422

⁶ Exhibit K1.3.

same as the Letter of Understanding used by Union on three previous pipeline construction projects⁷. During the oral hearing, Union agreed to some of the proposed changes and GAPLO indicated that it would be withdrawing some of its requests.

Although the construction and land restoration practices requested by GAPLO could be ordered by the OEB as individual conditions of approval, GAPLO argued that these items would be more effectively instituted by approving specific amendments to the wording of the Letter of Understanding.

Union argued that the Letter of Understanding should not be subject to OEB approval on the basis that the OEB has declined to do so in the past, and in its view lacks jurisdiction in certain respects. Union also argued that the damages referred to in measure (v) below are a term that should be negotiated with individual landowners. OEB staff indicated that they were not convinced that the OEB has the jurisdiction to approve the Letter of Understanding itself. OEB staff submitted that the OEB in this case can approve particular terms of the Letter of Understanding even if it declines to approve its entire form and content.

Findings

As indicated above, a number of construction and land restoration practices were agreed upon prior to the hearing. During the oral hearing, Union agreed to some of the changes proposed by GAPLO. The remaining unsettled issues are:

- i) Overwintering of stripped topsoil at the request of the landowner
- ii) Where topsoil is overwintered, restoration of identifiable subsidence in excess of 2 inches with the importation of topsoil
- iii) Stone-picking by hand and/or with a mechanical stone-picker of stones down to a size of 2 inches or larger in the first two years following construction and thereafter where there is a demonstrable need
- iv) Landowner approval of the source of any topsoil to be imported by Union to the landowner's property

⁷ Proceedings EB-2005-0550, EB-2007-0633 and EB-2009-0422

- v) Payment of damages by Union where Union conducts construction activities in wet soil conditions

For each of the practices described in (i) to (iv), there was evidence from Union that the specific modifications proposed by GAPLO are impractical, ineffective or not desirable in all situations, and from GAPLO that they are necessary and appropriate in some or all instances.

Mr. Kraayenbrink of GAPLO testified about the importance of topsoil to a farmer's livelihood: "Topsoil, for us, is our life's blood. That is how we put food on the table for our families. And when a company has the right--- when we have no right to go and have an option of how to best protect our topsoil, it is appalling in this day and age."

In view of the economic importance of topsoil to farmers, the OEB considers that the landowner should be entitled to decide if the measures described in (i) to (iv) should be taken, and directs Union to reflect this in the agreements it offers to affected landowners. With respect to the measure described in (v), the OEB agrees with Union that the issue of damages for any work conducted in wet soil is an issue to be negotiated between Union and individual landowners.

Accordingly, the OEB requires Union to offer to the affected landowners an agreement that contains the practices agreed to by Union and GAPLO prior to and during the hearing, and those ordered by the OEB in this Decision and Order and described in items (i) to (iv) above.

Conditions of Approval

Union has agreed to the standard OEB conditions of approval for sections 90 and 91 applications as proposed by OEB staff, except that it has asked that it be given until December 31, 2017 to start construction. The updated settlement agreement reflects this. GAPLO did not dispute these proposed conditions of approval, including the amended date to start construction. The OEB approves the conditions of approval proposed by OEB staff and the amended date to start construction. As discussed above, some additional conditions of approval are stipulated by the OEB.

IT IS ORDERED THAT:

1. Union Gas Limited shall abide by the conditions of approval set out in Appendix D of this Decision and Order.
2. Union Gas Limited shall file a form of easement agreement that reflects the OEB's findings in this Decision and Order concerning abandonment within seven days of the issuance of this Decision and Order.
3. Union Gas Limited shall offer to affected landowners an agreement that incorporates the construction and land restoration practices agreed to between Union and GAPLO prior to and at the hearing, plus those ordered by the OEB in this Decision and Order. Union Gas Limited shall file the agreement within seven days of the issuance of this Decision and Order.
4. Intervenors shall file with the OEB and forward to Union Gas Limited their cost claims within 7 days from the date of this Decision and Order.
5. Union Gas Limited shall file with the OEB and forward to intervenors any objections to the claimed costs within 14 days from the date of this Decision and Order.
6. Intervenors shall file with the Board and forward to Union Gas Limited any responses to any objections for cost claims within 21 days of the date of this Decision and Order.
7. Union Gas Limited shall pay the Board's costs incidental to this proceeding upon receipt of the OEB's invoice.

All filings with the OEB must quote the file number EB-2014-0261, and be made through the OEB's web portal at <https://www.pes.ontarioenergyboard.ca/eservice/>, and consist of two paper copies and one electronic copy in searchable / unrestricted PDF format. Filings must be received by the OEB by 4:45 p.m. on the stated date. Parties should use the document naming conventions and document submission standards outlined in the RESS Document Guideline found at www.ontarioenergyboard.ca.

If the web portal is not available, parties may e-mail their documents to the attention of the OEB Secretary at BoardSec@ontarioenergyboard.ca. All other filings not filed via the OEB's web portal should be filed in accordance with the OEB's *Practice Directions on Cost Awards*.

DATED at Toronto, April 30, 2015

ONTARIO ENERGY BOARD

Original signed by

Kirsten Walli
Board Secretary

Appendix C

Settlement Agreement

EB-2014-0261

DATE: April 30, 2015

EB-2014-0261
UNION GAS LIMITED
SETTLEMENT AGREEMENT
Filed February 27, 2015
Updated March 6, 2015

**EB-2014-0261
SETTLEMENT AGREEMENT**

This Settlement Agreement (the “Agreement”) is for the consideration of the Ontario Energy Board (the “Board”) in its determination, under Docket No. EB-2014-0261 for Union Gas Limited (“Union”).

On September 11, 2014, Union filed an application with the Board seeking approval for its 2016 Dawn Parkway Expansion Project (“the Project”). Subsequent to this, on September 30, 2014, Union filed its pre-filed evidence in support of the application. As stated in its evidence, the Project involves the installation of a new 44,500 ISO HP Lobo C Compressor plus modifications to existing facilities at the Lobo Compressor Station and, the construction of approximately 20 km of NPS 48 pipeline extending from the Hamilton Valve Site to the Milton Valve Site. These facilities will provide incremental capacity of 442,770 GJ/d on Union’s Dawn Parkway System with an in-service date of November 2016. The total estimated cost to construct the Project is \$415.7 million.

By Procedural Order No. 2 dated January 29, 2014, the Board scheduled a Settlement Conference on February 9, 2014. The Settlement Conference was duly convened, in accordance with Procedural Order No.2, with Gail Morrison as facilitator. The purpose of the Settlement Conference was to seek agreement on some or all of the issues identified in the Board’s Decision on Issues List dated February 6, 2014.

In Procedural Order No. 1 in this proceeding (dated November 18, 2014), the Board granted intervenor status to all parties as listed in Appendix A of Procedural Order No. 1. The following parties participated in the Settlement Conference:

- Association of Power Producers of Ontario (“APPPrO”)
- Building Owners and Managers Association of the Greater Toronto Area (“BOMA”)
- Canadian Manufacturers & Exporters (“CME”)
- Federation of Rental-Housing Providers of Ontario (“FRPO”)
- Gas Pipeline Landowners of Ontario (“GAPLO”)
- Kitchener Utilities (“Kitchener”)
- London Property Management Association (“LPMA”)
- Ontario Greenhouse Vegetable Growers (“OGVG”)
- School Energy Coalition (“SEC”)
- TransCanada PipeLines Limited (“TCPL”)
- Union Gas Limited (“Union”)
- Vulnerable Energy Consumers Coalition (“VECC”)

These issues cited in the Board’s February 6, 2014 Decision include:

1. Are the proposed facilities needed?
2. Do the proposed facilities meet the Board's economic tests as outlined in the Filing Guidelines on the Economic Tests for Transmission Pipeline Applications, dated February 21, 2013, as applicable?
3. What are the potential short-term and long-term rate impacts to customers? Are these costs and rate impacts to customers appropriate?
4. What are the facilities and non-facilities alternatives to the proposed facilities? Have these alternatives been adequately assessed and are any preferable to the proposed facilities, in whole or in part?
5. Do the facilities address the OEB Environmental Guidelines for Hydrocarbon Pipelines as applicable?
6. Are there any outstanding landowner matters for the proposed facilities with respect to routing and construction matters? For greater clarity, landowners include parties from whom permits, crossing agreements and other approvals are required.
7. Is the form of easement agreement offered by Union or that will be offered by Union to each owner of land affected by the approved route or location appropriate?
8. Are the proposed facilities designed in accordance with current technical and safety requirements?
9. Has there been adequate consultation with other potentially affected parties?
10. Does the project meet the capital pass-through mechanism criteria for pre-approval to recover the cost consequences of the proposed facilities?
11. If the Board approves the proposed facilities, what conditions, if any, are appropriate?

The result of the settlement negotiations between Union and stakeholders (the "Agreement") was a partial settlement in that the Agreement does not settle all issues in this proceeding. Issues 1, 2, 3, 4, 5, 8, 9 and 10 were completely settled. All remaining issues were unsettled, with partial settlements as noted below. These unsettled issues are specific to interests raised by GAPLO.

Consistent with the Board's Settlement Conference Guidelines (the "Guidelines"), the parties to the Agreement acknowledge and agree that none of the completely settled provisions of this Agreement are severable. If the Board does not accept the completely settled provisions of the Agreement in their entirety, there is no Agreement (unless the parties agree that any portion of the Agreement the Board does accept may continue as a valid Agreement).

It is further acknowledged and agreed that parties will not withdraw from this Agreement under any circumstances except as provided under Rule 32.05 of the Board's Rules of Practice and Procedure, interpreted as if this Agreement were the result of a Board-ordered settlement conference.

The parties agree that all communications between parties during the Settlement Conference, and all documents exchanged during the conference which were prepared to facilitate settlement discussions are, unless subsequently placed on the record by agreement between the parties, strictly confidential, without prejudice, and inadmissible unless relevant to the resolution of any ambiguity that subsequently arises with respect to the interpretation of any provision of this Agreement. The parties intend that the confidentiality of these negotiations be determined in accordance with the Board's Guidelines, interpreted as if this Agreement were the result of a Board-ordered settlement conference.

The role adopted by Board Staff in Settlement Conferences is set out on page 5 of the Board's Guidelines. Although Board staff is not a party to this Agreement, as noted in the Guidelines, "Board Staff who participate in the settlement conference are bound by the same confidentiality standards that apply to parties to the proceeding". Board staff attended these discussions on that basis.

The parties have used their best efforts to ensure that the evidence supporting the Agreement is set out in the Agreement. The evidence supporting the agreement on each issue is cited in each section of the Agreement. Abbreviations will be used when identifying exhibit references. For example, Exhibit A, Tab 4, Schedule 1, Page 1 will be referred to as A/T4/S1/p. 1. The structure and presentation of the settled issues is consistent with settlement agreements which have been accepted by the Board in prior cases. The parties agree that this Agreement forms part of the record in the proceeding.

5. Do the facilities address the OEB Environmental Guidelines for Hydrocarbon Pipelines as applicable?

(Complete Settlement)

Union agrees to undertake a post-construction comparative crop yield study. Union also agrees that it will offer to landowners, at a minimum, the Hamilton to Milton Letter of Understanding in the form attached hereto as Appendix 4. By doing so, GAPLO's request in its evidence at page 12, para 35 a) that Union be required to file a cumulative effects assessment in this proceeding is satisfied.

The following parties are in agreement: GAPLO

The following parties take no position: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, OGVG, SEC, VECC and TCPL

Evidence References:

A/T12, A/T12/Attachment 1 and 2, Exhibit B.GAPLO.6, Exhibit B.GAPLO.10, Exhibit B.GAPLO.14, Exhibit B.GAPLO.15, Exhibit B.GAPLO.21, Exhibit B.GAPLO.23, Exhibit B.GAPLO.24, Exhibit B.GAPLO.25, Exhibit B.GAPLO.26, Exhibit B.GAPLO.28, written evidence and interrogatories of GAPLO

6. Are there any outstanding landowner matters for the proposed facilities with respect to routing and construction matters? For greater clarity, landowners include parties from whom permits, crossing agreements and other approvals are required.

(Partial Settlement)

Union agrees to the appointment of an independent construction monitor for construction on agricultural lands for the Hamilton- Milton pipeline. The construction monitor will be chosen by a committee consisting of one representative from each of Union, the OEB and GAPLO. The scope of work for the construction monitor will be:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding ("LOU") agreed to between landowners and Union;
3. To review all specific construction commitments included in Union's construction contract;
4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

Union further agrees to file interim and final reports of the construction monitor with the OEB and provide copies to GAPLO. Union's agreement is without prejudice to any position it may take in a future proceeding with respect to the appointment of an independent construction monitor.

There is no agreement on using the landowner LOU from EB-2005-0550 (Strathroy-Lobo) for Hamilton Milton Pipeline Project. This issue will proceed to hearing. The Hamilton-Milton LOU is provided at Appendix 4.

The following parties are in agreement: GAPLO

The following parties take no position: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, OGVG, SEC, VECC and TCPL

Evidence References:

A/T13, Exhibit B.Staff.6, Exhibit B.CN.1, Exhibit B.GAPLO.1, Exhibit B.GAPLO.2, Exhibit B.GAPLO.7, Exhibit B.GAPLO.8, Exhibit B.GAPLO.11, Exhibit B.GAPLO.12, Exhibit B.GAPLO.16, Exhibit B.GAPLO.17, Exhibit B.GAPLO.19, Exhibit B.GAPLO.20, Exhibit B.GAPLO.28, Exhibit B.GAPLO.30, written evidence and interrogatories of GAPLO

7. Is the form of easement agreement offered by Union or that will be offered by Union to each owner of land affected by the approved route or location appropriate?

(Partial settlement)

There is no agreement to use the Form of Easement approved by the Board in EB-2005-0550 (Strathroy Lobo Pipeline Project) for the Hamilton Milton Pipeline Project as requested in GAPLO's evidence at page 12, para 34 a) . The specific clause at issue relates to pipeline abandonment. This pipeline abandonment issue will proceed to hearing.

Parties agree to the following wording related to future use of lands adjacent to the easement:

“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 land in the Lands in accordance with standard drainage practice, if the Transferee is given at least (30) thirty days notice of such planned system prior to the installation of the Pipeline. 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. In the event there is a change in the use of all, or a portion of, the Transferor Lands adjacent to the Lands which results in the Pipeline no longer being in compliance with the pipeline design class location requirements, then the Transferee shall be responsible for any costs associated with any changes to the Pipeline required to ensure compliance with the class location requirements.”

The following are in agreement: GAPLO

The following parties take no position: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, SEC, OGVG, TCPL and VECC

Evidence References:

A/T13, Exhibit B.GAPLO.7, Exhibit B.GAPLO.16, Exhibit B.GAPLO.17, written evidence and interrogatories of GAPLO

8. Are the proposed facilities designed in accordance with current technical and safety requirements?

(Complete settlement)

Parties agree the proposed facilities are designed in accordance with current technical and safety requirements. In response to GAPLO’s request in evidence page 12 paragraph 35b) Union filed their Standard Operating Procedure for depth of cover on February 23, 2015. Union also agrees that it will offer to landowners, at a minimum, the Hamilton to Milton Letter of Understanding in the form attached hereto as Appendix 4.

The following parties agree with the settlement of this issue: GAPLO

The following parties take no position: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, SEC, OGVG, TCPL and VECC

Evidence References:

A/T11, Exhibit B.GAPLO.2, Exhibit B.GAPLO.3, Exhibit B.GAPLO.29, Exhibit B.GAPLO.30

9. Has there been adequate consultation with other potentially affected parties?

(Complete settlement)

Parties agree there has been adequate consultation with other potentially affected parties.

The following parties agree with the settlement of this issue: GAPLO

The following parties take no position: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, OGVG, SEC, TCPL and VECC

Evidence References:

A/T12, A/T13, A/T14, Exhibit B.Staff.7

10. Does the project meet the capital pass-through mechanism criteria for pre-approval to recover the cost consequences of the proposed facilities?

(Complete settlement)

The parties agree that the project meets the capital pass-through mechanism criteria for pre-approval to recover the cost consequences of the proposed facilities.

As part of the EB-2013-0202 Settlement Agreement (2014-2018 Incentive Rate Mechanism (“IRM”)), Parties agreed to establish a deferral account to capture differences between the forecast annual net revenue requirement and the actual net delivery revenue requirement for each year of the IRM. As part of this Agreement, parties agree that if Union’s facilities (Lobo C and Hamilton-Milton) are in-service prior to TransCanada Pipelines (“TCPL”) facilities downstream of Parkway (the Vaughn Loop), parties are free to take any position as to whether or not an adjustment to the deferral account balance as a result of this timing difference is warranted, including whether Union’s facilities should be considered in-service for ratemaking purposes. By agreeing to the above, parties agree that no condition of approval linking the construction or in-service timing of Union’s Dawn Parkway facilities to the construction or in-service timing of TCPL’s facilities is required.

The following parties agree with the settlement of this issue: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, OGVG, SEC and VECC

The following parties take no position: GAPLO and TCPL

Evidence References:

A/T9, A/T10, Exhibit B.Staff.1, Exhibit B.Staff.2, Exhibit B.APPrO.1, Exhibit B.CME.2, Exhibit B.LPMA.7, Exhibit B.SEC.1.

11. If the Board approves the proposed facilities, what conditions, if any, are appropriate?

(Partial Settlement)

With the exception of GAPLO (Issues 6 and 7) parties agree that no additional conditions to the standard conditions of approval are required subject to the settled issues in Issues 3, 5, 8 and 10 above, and Union's response in Exhibit B.Staff.8 where Union noted that condition 1.2 of the standard conditions of approval proposed by Board staff should read as "Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2017, unless construction has commenced prior to that date."

The following parties are not in agreement: GAPLO

The following parties agree with the settlement of this issue: APPrO, BOMA, CME, FRPO, LPMA, Kitchener, OGVG, SEC and VECC

The following parties take no position: TCPL

Evidence References:

Exhibit B.Staff.8, written evidence and interrogatories of OGVG.FRPO.CME, written evidence and interrogatories of GAPLO

LETTER OF UNDERSTANDING

Between:

hereinafter referred to as the “**Landowner**”

and

Union Gas Limited

hereinafter referred to as the “**Company**”

INTRODUCTION

The Company has applied to the Ontario Energy Board to construct a 48 inch diameter pipeline which will run approximately 20 kilometres starting at the existing Union Gas Hamilton Valve Site, approximately 400 metres east of Highway 6, and travelling parallel to an existing 48 inch Union Gas natural gas pipeline easement, and terminating at the existing Union Gas Milton Valve Site located 150 metres west of Philbrook Drive, south of Derry Road (the “Project”). As a result it will be necessary for the Company to enter onto the Landowner’s property for the purpose of constructing and installing the pipeline.

The Company recognizes that the construction of the pipeline may result in damage to the Landowner’s property and a disruption to the Landowner’s daily activities for which the Company is obligated to compensate the Landowner and observe various construction techniques to minimize such damages.

It is the policy of the Company that Landowners affected by its pipeline projects be dealt with on a consistent basis that is fair to both parties. This Letter of Understanding represents the results of negotiations between the Company and the Landowner and outlines the obligations of each party with respect to:

- i) The construction of the pipeline;
- ii) Remediation of the Landowner’s property; and,
- iii) Compensation to the Landowner for various damages as a result of the construction of the pipeline.

The parties acknowledge that the Company is required to adhere to all of the conditions set out in the Leave to Construct Order of the Ontario Energy Board and that the foregoing are additional undertakings that the Company has agreed upon with the Landowner on the Project. A copy of the Conditions of Approval will be mailed to the Landowner upon request.

1. Pre-Construction Meeting

Prior to construction, the Company’s representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.

2. Testing For Soybean Cyst Nematode

In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company will work with OMAFRA to develop the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests.

3. Continued Supply of Services

Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.

4. Water Wells

To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner.

Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.

5. Staking of Work Space

The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area. The stakes will be located at 30 metre (98.4 foot) intervals prior to construction. The intervals or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.

6. Topsoil Stripping

Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.

The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.

If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil.

At the recommendation of the Company's Soils Consultant, topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.

7. Depth of Cover

The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.

If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate current processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.

8. Levelling of Pipe Trench

During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.

If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:

- i) 0 to 4 inches - no additional work or compensation.
- ii) Greater than 4 inches - the Company will either:
 - (a) Strip topsoil, fill the depression with subsoil and replace topsoil, or
 - (b) Repair the settlement by filling it with additional topsoil.

If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:

- i) 0 to 4 inches - no additional work or compensation;
- ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil;
- iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner.

If the topsoil is over wintered and subsidence occurs in the year following top soil replacement the following guidelines will be observed:

- i) 0 to 4 inches - no additional work or compensation.
- ii) Greater than 4 inches - the Company will repair the settlement by filling it with additional topsoil.

If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.

9. Topsoil Replacement, Compaction Removal and Stone Picking

The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.

Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.

The Company will pick stones prior to topsoil replacement.

Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter.

After topsoil replacement, the topsoil will be tilled with an implement(s) as agreed by the Company and Landowners.

After cultivation, the Company will pick stones again.

The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.

If agreed to by the parties, the Company will return in the year following construction and will cultivate the easement area. When necessary, to accommodate planting schedules, the Landowner should perform cultivation themselves, at the Company's expense (see Schedule of Rates attached as Schedule 3).

The Company shall, at a time satisfactory to the Landowner, return to pick stones 100 mm (4 inches) or larger in the following two years after construction, where there is a demonstrable need.

10. Drainage Tiling

The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company's activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company's activities, including future maintenance operations and problems caused by the Company's contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company's operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner's satisfaction.

The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior too, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or

temporary tile construction required on their land. The Consultant will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of five licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.

Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre-construction tiling plans where required. The purpose of pre-construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or greater crossing the easement. The Company will ensure that any such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.

During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan and profile for each affected owner. These post construction tile plans will show the Landowner exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.

During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.

The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.

Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:

- i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.
- ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.

The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.

In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.

Once the tiling is complete the Consultant will adjust all tile plans to reflect the as-constructed information and a copy will be provided to the Landowner for their records.

11. Water Accumulation during Construction

The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.

12. Access Across the Trench

Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from crossing the trench line with farm equipment, the Company will improve crossing conditions either by further replacement and/or compaction of subsoil at the previous plug locations.

Should conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.

13. Restoration of Woodlots

If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Union will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.

14. Tree Replacement

The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.

For windbreaks/hedgerows the Company will implement the following practice:

- i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.
- ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.

The Company will warrant such trees for a period of one year following planting, provided the Landowner waters the trees as appropriate after planting.

15. Covenants

Company covenants as follows:

- i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.
- ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.
- iii) Whenever possible, all vehicles and equipment will travel on the trench line.
- iv) All subsoil from road bores will be removed.
- v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.
- vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.

- vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.
- viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.
- ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.
- x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages.
- xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.
- xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.
- xiii) To ensure suitable passage and land access for agricultural equipment during construction.
- xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription to rectify the problem.
- xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.
- xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil.
- xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.
- xviii) To implement the Company's Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.
- xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined that cover over the pipeline is less than 0.9 metres the Company shall restore depth of cover to a minimum of 0.9 metres with the importation of topsoil or by lowering the pipe. In areas where the top of the pipe is at

or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.

- xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company's Consultant.
- xxi) To implement Union's wet soil shut down practice as described in Schedule 4.

Landowner covenants as follows:

- i) To execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction acCompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.
- ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.
- iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.

16. Dispute Resolution

In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:

- i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,
- ii) The establishment of levels of compensation for specialty crops as in Article 21.
- iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.

Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.

17. Land Rights - Easements

Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.

Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at a Ontario Municipal Board Compensation

Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.

18. Land Rights – Temporary Land Use Agreements and Top Soil Storage

These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.

19. Damage Payments

Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is completed. Top soil storage damages will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.

20. Disturbance Damages

Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer. Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected Landowner to address these site-specific issues.

21. Construction Damages – Crop Loss

The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:

- i) year of construction and future crop loss;
- ii) stone picking beyond the second year following construction;
- iii) crop losses associated with establishment of a cover crop.

Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the "One Time" program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.

Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:

- i) Third year crop loss under "One Time" Program = 50%.
- ii) Actual crop loss following investigation and sampling = 60%.
- iii) Difference payable to Landowner = 10%.

Crop Loss for topsoil storage Areas

Compensation for crop loss on topsoil storage areas will be as follows:

- In year of construction - 100% crop loss;
- In years after construction - measured crop loss;
- Payments will be based upon actual area used for topsoil storage;
- Compensation will not be prepaid;
- Compensation will be paid on an as incurred basis.

Speciality Crops

The one time payment does not apply to specialty crops. Specialty crops include tobacco, produce and registered seeds. Compensation will be negotiated on a site specific basis.

Post construction cover crop program

In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and Food. The cost of seed planted over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.

22. Woodlots and Windbreak/Hedgerow Trees

With respect to compensation for damage to woodlots, the Landowner will have the following two options:

Option 1:

Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.

Option 2:

The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.

With respect to compensation for damage to other wooded areas:

Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.

Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.

The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected Landowners and payment will be made in accordance with the reports.

The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.

23. Gored Land

The Company agrees to pay the Landowner 100 % crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project.

24. Insurance

Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.

25. Abandonment

Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner

26. Liability

The Company will be responsible for damages to property, and equipment, resulting from construction operations, and will pay for repairs or replacement costs. The Company will be responsible, and indemnify the Landowner from any and all liabilities, damages, costs, claims, suits and actions except those resulting from the gross negligence or wilful misconduct of the Landowner.

27. Assignment

All rights and obligations contained in this agreement 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. The Company shall not assign this agreement without prior written notice to the Landowner and,

despite such assignment; the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.

28. Site Specific Issues

Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.

29. Compensation Levels

The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.

Dated at _____, Ontario this ____ day of _____, 2015.

UNION GAS LIMITED

Name & Title:

Dated at _____, Ontario this ____ day of _____, 2015.

Witness:

Landowner:

Landowner:

Landowner:

Landowner:

SCHEDULE 1: SETTLEMENT

Property No.: H.M., Landowner(s): _____

The parties to this Letter of Understanding dated the ___ day of _____, 2015, in consideration of making this settlement have summarized below all the obligations, claims, damages and compensation arising from and for the required land rights and the pipeline construction across the Landowner(s)' property, name: _____

(Check all applicable items of compensation)

NOTE: Refer to APPENDIX "C" within Option Agreements for site specific details

Yes No

LAND RIGHTS

- | | | | | | |
|--------------------------|--------------------------|-----|----------------------------|----|-----------|
| <input type="checkbox"/> | <input type="checkbox"/> | (a) | Easement @ | \$ | per acre. |
| <input type="checkbox"/> | <input type="checkbox"/> | (b) | Temporary Land Use @ | \$ | per acre. |
| <input type="checkbox"/> | <input type="checkbox"/> | (c) | Topsoil Storage Land Use @ | \$ | per acre |

DAMAGES

- | | | | | | |
|--------------------------|--------------------------|-----|---------------|----|-----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | (a) | Disturbance @ | \$ | per acre of easement. |
| <input type="checkbox"/> | <input type="checkbox"/> | (b) | Disturbance @ | \$ | per acre of Temporary Land Use |
| <input type="checkbox"/> | <input type="checkbox"/> | (c) | Disturbance @ | \$ | per acre of Top Soil Storage area |

CROP LOSS

- | | | | | |
|--------------------------|--------------------------|--------------------|----|-----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | One Time Payment @ | \$ | per acre of easement. |
| <input type="checkbox"/> | <input type="checkbox"/> | One Time Payment @ | \$ | per acre of Temporary Land Use |
| <input type="checkbox"/> | <input type="checkbox"/> | One Time Payment @ | \$ | per acre of Top Soil Storage area |

NON-AGRICULTURAL DAMAGE PAYMENTS

- | | | | | |
|--------------------------|--------------------------|--------------------------|----|----------|
| <input type="checkbox"/> | <input type="checkbox"/> | Non-agricultural Lands @ | \$ | per acre |
| <input type="checkbox"/> | <input type="checkbox"/> | Woodlots @ | \$ | per acre |

OBLIGATIONS

- a) This Letter of Understanding.
- b) Attached as Schedule 2 any other special requirements or compensation issues.

Initialed for identification by owner(s): _____.

Approval (Union Gas Limited): _____.

SCHEDULE 2: SETTLEMENT

Property No.: H.M., Landowner(s): _____

SCHEDULE 3

WOODLOT EVALUATION

At the time of signing of the Letter of Understanding the Landowners with woodlots will be given 3 options.

1. take a one time full and final for the total easement.
2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately.
3. take the crop monitoring program and have the woodlot evaluated separately.

Woodlots will be assessed in the following manner:

A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management.

This volume will then be determined on an annual basis.

Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot.

This value will then be present valued using the same formula as the one time payment option.

SCHEDULE 4

AESTHETIC TREE EVALUATION

The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values.

During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes.

Union would contract a qualified person to complete an evaluation of the trees.

The Landowners would be paid the evaluated price for the trees in addition to other payments.

If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment.

If the Landowner disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation.

EVALUATION CRITERIA

A four part evaluation criteria will be completed for aesthetic trees:

Tree Value = Basic Value X Species Rating X Condition Rating X Location Rating

Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area.

Species rating is a percentage rating based on the relative qualities of the tree species.

Condition rating is a percentage rating based on the health of the tree.

Location rating is a percentage rating based on the location of the tree.

SCHEDULE 5

Schedule of Rates for Work Performed by Landowners

Typically all work will be done by the Company. If the parties agree that the Landowner will perform work on behalf of the Company, the Company will remunerate the Landowner in accordance with the following;

- | | | | |
|----|-----------------|------|---------------------------------------|
| 1. | Stonepicking | - \$ | per hour/per person picking by hand |
| | | - \$ | per hour for use of tractor and wagon |
| 2. | Chisel Plowing | - \$ | per hour |
| 3. | Cultivation | - \$ | per hour |
| 4. | Tile Inspection | - \$ | per hour * |

* Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.

SCHEDULE 6

Wet Soils Shutdown

The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.

While constructing the Company's pipeline the Company's senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e., can traffic be re-routed within the easement lands around wet area(s) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse affects on the soils.

Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Union's inspection staff is responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. Where construction activities are undertaken by the Company in wet soil conditions, additional mitigation measures may be put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Union on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Union. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.

Appendix D

Conditions of Approval

EB-2014-0261

DATE: April 30, 2015

Conditions of Approval

1 General Requirements

- 1.1 Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2014-0261 except as modified by this Order and these Conditions of Approval.
- 1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2017, unless construction has commenced prior to that date.
- 1.3 Union shall implement all the recommendations of the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee (OPCC) review.
- 1.4 Union shall advise the Board's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.
- 1.5 Within 15 months of the final in-service date, Union shall file with the Board Secretary a Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and an explanation for any significant variances from the estimates filed in this proceeding.

2 Project and Communications Requirements

- 2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Natural Gas Applications.

- 2.2 Union shall designate a person as project engineer and shall provide the name of the individual to the Board's designated representative. The project engineer will be responsible for the fulfillment of the Conditions of Approval on the construction site. Union shall provide a copy of the Order and Conditions of Approval to the project engineer, within seven days of the Board's Order being issued.
- 2.3 Union shall give the Board's designated representative and the Chair of the OPCC ten days written notice in advance of the commencement of the construction.
- 2.4 Union shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the Board's Order.
- 2.5 Union shall file with the Board's designated representative notice of the date on which the installed pipelines were tested, within one month after the final test date.
- 2.6 Union shall furnish the Board's designated representative with five copies of written confirmation of the completion of construction. A copy of the confirmation shall be provided to the Chair of the OPCC.

3 Monitoring and Reporting Requirements

- 3.1 Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

- 3.2 The interim monitoring report shall confirm Union's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.
- 3.3 The final monitoring report shall describe the condition of any rehabilitated land and the effectiveness of any mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

4 Other Approvals

- 4.1 Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, and shall provide an affidavit that all such approvals, permits, licences, and certificates have been obtained.

ATTACHMENT 8

LETTER OF UNDERSTANDING

Between:

hereinafter referred to as the “**Landowner**”

and

Union Gas Limited

hereinafter referred to as the “**Company**”

INTRODUCTION

The Company has applied to the Ontario Energy Board to construct a 48 inch diameter pipeline which will run approximately 20 kilometres starting at the existing Union Gas Hamilton Valve Site, approximately 400 metres east of Highway 6, and travelling parallel to an existing 48 inch Union Gas natural gas pipeline easement, and terminating at the existing Union Gas Milton Valve Site located 150 metres west of Philbrook Drive, south of Derry Road (the “Project”). As a result it will be necessary for the Company to enter onto the Landowner’s property for the purpose of constructing and installing the pipeline.

The Company recognizes that the construction of the pipeline may result in damage to the Landowner’s property and a disruption to the Landowner’s daily activities for which the Company is obligated to compensate the Landowner and observe various construction techniques to minimize such damages.

It is the policy of the Company that Landowners affected by its pipeline projects be dealt with on a consistent basis that is fair to both parties. This Letter of Understanding represents the results of negotiations between the Company and the Landowner and outlines the obligations of each party with respect to:

- i) The construction of the pipeline;
- ii) Remediation of the Landowner’s property; and,
- iii) Compensation to the Landowner for various damages as a result of the construction of the pipeline.

The parties acknowledge that the Company is required to adhere to all of the conditions set out in the Leave to Construct Order of the Ontario Energy Board and that the foregoing are additional undertakings that the Company has agreed upon with the Landowner on the Project. A copy of the Conditions of Approval will be mailed to the Landowner upon request.

1. Pre-Construction Meeting

Prior to construction, the Company’s representatives shall visit with the Landowner to conduct a preconstruction interview. During this interview the parties will review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Letter of Understanding. For

greater certainty, and to help ensure Landowner requests are implemented, the Company will document the results of such meetings and provide a copy to the Landowner.

2. Testing For Soybean Cyst Nematode

In consultation with the Landowner, the Company agrees to sample all agricultural easements along the pipeline route of this Project, before construction, and any soils imported to the easement lands for the presence of soybean cyst nematode (SCN) and provide a report of test results to the Landowner. In the event the report indicates the presence of SCN, the Company will work with OMAFRA to develop the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests.

3. Continued Supply of Services

Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected Landowners prior to service interruption. In the case of unplanned interruption, temporary services will be provided by the Company at the earliest possible opportunity.

4. Water Wells

To ensure that the quality and quantity (i.e. static water levels) of well water and/or the well itself is maintained, a monitoring program will be implemented for all dug or drilled wells within 100 metres of the proposed pipeline and for any other wells recommended by the Company's hydrogeology Consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Results of testing will be summarized in a letter and will be provided to the Landowner.

Should well water (quantity and/or quality) or the well itself, be damaged from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.

5. Staking of Work Space

The Company agrees to stake the outside boundary of the workspace necessary for the construction of this Project which may include an easement and temporary land use area. The stakes will be located at 30 metre (98.4 foot) intervals prior to construction. The intervals or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings.

6. Topsoil Stripping

Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately and the Company will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the Landowner, topsoil will be ploughed before being stripped to a depth as specified by the Landowner.

The Company will strip topsoil across the entire width of the easement (at the request of the Landowner), provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the Landowner.

If requested by the Landowner the Company will not strip topsoil. The topsoil/subsoil mix will be placed on the easement on top of the existing topsoil.

At the recommendation of the Company's Soils Consultant, topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.

7. Depth of Cover

The Company will install the pipeline with a minimum of 1.2 metres of cover, except where bedrock is encountered at a depth less than 1.2 metres, in which case the pipe will be installed with the same cover as the bedrock, but not less than 1.0 metre below grade.

If the Company, acting reasonably, determines in consultation with the Landowner that it is necessary to increase the depth of the Pipeline to accommodate current processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover.

8. Levelling of Pipe Trench

During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The Landowner shall have the right of first refusal on any such excess material. The Company's representative will consult with the Landowner prior to the removal of any excess material.

If topsoil is replaced in the year of construction and trench subsidence occurs the year following construction, the following guidelines will be observed:

- i) 0 to 4 inches - no additional work or compensation.
- ii) Greater than 4 inches - the Company will either:
 - (a) Strip topsoil, fill the depression with subsoil and replace topsoil, or
 - (b) Repair the settlement by filling it with additional topsoil.

If topsoil is replaced during the year of construction and mounding over the trench persists the year following construction, the following guidelines will be observed by the Company:

- i) 0 to 4 inches - no additional work or compensation;
- ii) Greater than 4 inches the Company will strip topsoil, remove the excess subsoil and replace the stripped topsoil;
- iii) Should adequate topsoil depth be available, the mound can be levelled with the approval of the Landowner.

If the topsoil is over wintered and subsidence occurs in the year following top soil replacement the following guidelines will be observed:

- i) 0 to 4 inches - no additional work or compensation.
- ii) Greater than 4 inches - the Company will repair the settlement by filling it with additional topsoil.

If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4 inches level stated above, the Company will remove the restriction by one of the methods described above.

9. Topsoil Replacement, Compaction Removal and Stone Picking

The subsoil will be worked with a subsoiling implement, as agreed by the Company and Landowner.

Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.

The Company will pick stones prior to topsoil replacement.

Stone picking will be completed, by hand or by mechanical stone picker to a size and quantity consistent with the adjacent field, but not less than stones 100 mm (4 inches) in diameter.

After topsoil replacement, the topsoil will be tilled with an implement(s) as agreed by the Company and Landowners.

After cultivation, the Company will pick stones again.

The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the Landowner, upon request.

If agreed to by the parties, the Company will return in the year following construction and will cultivate the easement area. When necessary, to accommodate planting schedules, the Landowner should perform cultivation themselves, at the Company's expense (see Schedule of Rates attached as Schedule 3).

The Company shall, at a time satisfactory to the Landowner, return to pick stones 100 mm (4 inches) or larger in the following two years after construction, where there is a demonstrable need.

10. Drainage Tiling

The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance. The Company will be responsible for the remedy, in consultation with the Landowner, of any drainage problem created by the existence of the pipeline present and future. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the Company's activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the Company's activities, including future maintenance operations and problems caused by the Company's contractors, agents or assigns. Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from the Company's operations, the Company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the Landowner's satisfaction.

The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior too, during and after construction. The Consultant will be responsible to gather as much background information from each Landowner prior to construction as available, and with this information in conjunction with the Landowner they will determine whether there is pre-construction, post construction and/or

temporary tile construction required on their land. The Consultant will provide where requested each Landowner with a tile plan for their review and approval prior to any installation of tile. The installation of tile will only be performed by a licensed drainage contractor to ensure that all drainage best practices are used. The Company will consult with the Landowner and mutually develop a list of five licensed tile drainage contractors from the area to bid on the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling where practicable. The Company will provide the Landowner or his/her designate advance notice of the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans obtained by the Landowner for future installation. If the Landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Consultant will work with the Landowner accordingly.

Once the Consultant has reviewed all the drainage background provided to them they will proceed in developing pre-construction tiling plans where required. The purpose of pre-construction work is to ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In conjunction with the Landowner the Consultant will design an appropriately sized header tile (interceptor drain) which will be installed 1m outside the easement limits by trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted tiles will be connected or end plugged accordingly. By installing the main outside the easement limits the Company can guarantee the integrity of the existing drainage system during the construction period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as reasonably possible any existing tiles 150mm or greater crossing the easement. The Company will ensure that any such crossings will be temporarily repaired across the trench line and maintained during the complete construction period until post construction work can repair them permanently. The Company where possible will expose any such tile crossings prior to pipeline trenching operations to obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.

During construction the Consultant will be following the trenching operations collecting / monitoring and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and reviewed all the survey information they will develop a post-construction tile plan and profile for each affected owner. These post construction tile plans will show the Landowner exactly how many tiles are to be installed on easement and by what method the contractor is to use plow/trench.

During construction, the Consultant will be following the trenching operations to ensure that the drainage is maintained.

The Consultant will also provide the Landowner with the most recent specifications concerning tile support systems for repairing and installing new tile across the pipeline trench. Once the Consultant has reviewed the drawing with the Landowner for their approval and received signature on the plan, the Consultant will provide the Landowner with a copy along with a specification for installation so they can monitor the work to be completed.

Also the Company will review other areas of drainage recommended by the drainage Consultant/Landowner such as:

- i) In areas where water may accumulate on or off easement as a result of the construction, the drainage Consultant, in conjunction with the Landowner, will develop a temporary tile plan to mitigate these impacts where the water cannot be pumped into an open drain or ditch. The Company could then pump into the temporary tile, but not into any existing tiles unless otherwise discussed and agreed upon by the Landowner.
- ii) In areas where the pipeline construction program clears lands adjacent to existing pipelines and adjacent drained land and as a result creates a newly cleared area large enough to farm, the Company will, at the request of the Landowner, develop a tile plan to drain the cleared area. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the tile plan, provided the cost of such work does not exceed the net present value of the crop revenue from the cleared area. The net present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the Landowner releases the Company from all future operation and maintenance responsibilities for the pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the Landowner obtains necessary easements or releases fully authorizing such crossings.

The Company will do its best weather permitting to complete the post construction tiling work in the year of pipeline construction after the topsoil has been pulled, unless otherwise agreed upon with the Landowner. If it is not possible for the Company to complete the post construction tiling in the year of construction, the Company will undertake all measures possible to mitigate any off easement damages to the best of its ability.

In situations where topsoil is to be over wintered, the tiling plan will address the timing of tile installation.

Once the tiling is complete the Consultant will adjust all tile plans to reflect the as-constructed information and a copy will be provided to the Landowner for their records.

11. Water Accumulation during Construction

The Company will, unless otherwise agreed to with the Landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the Landowner with a proposed temporary tiling plan for review and approval. If the Company pumps into an existing tile with the Landowner's permission, the water will be filtered.

12. Access Across the Trench

Where requested by the Landowner, the Company will leave plugs for access across the trench to the remainder of the Landowner's property during construction. Following installation of the pipe and backfill, if soft ground conditions persist that prevent the Landowner from crossing the trench line with farm equipment, the Company will improve crossing conditions either by further replacement and/or compaction of subsoil at the previous plug locations.

Should conditions still prevent Landowner crossing, the Company will create a gravel base on filter fabric across the trench line at the previous plug locations and remove same at the further request of the Landowner.

13. Restoration of Woodlots

If requested by the Landowner prior to the start of construction, all stumps and brush will be removed from the easement. If the Landowner does not convert the land to agricultural use, Union will maintain a minimum 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the Landowner.

14. Tree Replacement

The Company has established a policy to replant twice the area of trees that are cleared for the Project. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this program. Tree seedlings will be replanted on the right-of-way or within the Landowner's property using species determined in consultation with the Landowner. Although replanting on easement is not encouraged by the Company, when planting on easement occurs, it must be done in accordance with the easement and the Company's policies.

For windbreaks/hedgerows the Company will implement the following practice:

- i) If a deciduous (hardwood) tree in excess of six (6) feet is removed, a six (6) foot replacement tree will be planted; if a tree less than six (6) feet in height is removed, a similar sized tree will be planted.
- ii) If a coniferous (evergreen) tree in excess of four (4) feet is removed, a four (4) foot replacement tree will be planted; if a tree less than four (4) feet in height is removed, a similar sized tree will be planted.

The Company will warrant such trees for a period of one year following planting, provided the Landowner waters the trees as appropriate after planting.

15. Covenants

Company covenants as follows:

- i) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.
- ii) All construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.
- iii) Whenever possible, all vehicles and equipment will travel on the trench line.
- iv) All subsoil from road bores will be removed.
- v) To replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner.
- vi) Any survey monuments which are removed or damaged during pipeline construction will be reset.

- vii) Its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into municipal drains to provide access to the easement.
- viii) It will not use any laneway or culvert of the Landowner without the Landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the Landowner accordingly.
- ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.
- x) That construction activities will not occur outside of agreed to areas without the written permission of the Landowner. In the event that such activities occur, the Company will pay for damages.
- xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.
- xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.
- xiii) To ensure suitable passage and land access for agricultural equipment during construction.
- xiv) If there is greater than 50% crop loss after five years, at the request of the Landowner, the Company will retain an independent soils Consultant satisfactory to both parties to develop a prescription to rectify the problem.
- xv) To permit the planting of the 6 metre strip with permission for the re-establishment of windbreaks and that trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.
- xvi) In consultation with the Landowner, the Company agrees to retain an independent Consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoil and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil.
- xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.
- xviii) To implement the Company's Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.
- xix) At the request of the Landowner, the Company shall undertake a depth of cover survey of the pipeline and shall provide its findings to the Landowner. In agricultural areas, where it is determined that cover over the pipeline is less than 0.9 metres the Company shall restore depth of cover to a minimum of 0.9 metres with the importation of topsoil or by lowering the pipe. In areas where the top of the pipe is at

or below bedrock, the Company will ensure a minimum of 0.6 metres of cover over the pipeline.

- xx) Any imported topsoil shall be natural, free of SCN and shall have attributes consistent with the topsoil of adjacent lands as determined by the Company's Consultant.
- xxi) To implement Union's wet soil shut down practice as described in Schedule 4.

Landowner covenants as follows:

- i) To execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in this Letter of Understanding. It is suggested that any tenant(s) who are affected by construction acCompany the Landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment.
- ii) To be responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.
- iii) To be responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company, as damages payments are made directly to the registered Landowner.

16. Dispute Resolution

In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent Consultants satisfactory to both the Landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:

- i) The need for topsoil importation as in Article 8 hereof, respecting the existence of identifiable subsidence,
- ii) The establishment of levels of compensation for specialty crops as in Article 21.
- iii) The resolution of future crop loss claims for Additional Productivity Loss under Article 21 hereof.

Where Construction Damages and Disturbance Damage settlements cannot be negotiated, the Company or the Landowner may apply to Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the Landowner's executing the easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline.

17. Land Rights - Easements

Land rights required for the Project include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender or be released from any of its obligations under an easement for this Project without the consent of the Landowner.

Consideration for these rights will be paid at the rate of 100% of the appraised market value of the affected lands. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the Landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the Landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at a Ontario Municipal Board Compensation

Hearing and the Company's offers would not prejudice either party's presentation at the Hearing.

18. Land Rights – Temporary Land Use Agreements and Top Soil Storage

These rights will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Consideration for these rights will be paid at the rate of 50% of the appraised market value of the affected land. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify these rights in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above.

19. Damage Payments

Compensation for damages can be grouped under two headings namely: Disturbance Damages, which are paid at the time easements and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is completed. Top soil storage damages will be paid after construction is completed. Disturbance and Construction damage payments will apply to easement, temporary land use and top soil storage and will be based upon the areas of the proposed pipeline easement and temporary land use as set out in Schedule 1.

20. Disturbance Damages

Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming operations, restricted headlands, interrupted access and extra applications of fertilizer. Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected Landowner to address these site-specific issues.

21. Construction Damages – Crop Loss

The Company will offer the Landowner a one-time settlement for crop loss damages incurred on the easement and temporary land use areas resulting from the Project, which settlement will include the following:

- i) year of construction and future crop loss;
- ii) stone picking beyond the second year following construction;
- iii) crop losses associated with establishment of a cover crop.

Notwithstanding that the Landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program as in any year following construction and the Landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the Landowner for the difference calculated by applying the percentage loss to the Landowner's actual gross return in the year and deducting the compensation received for that year under the "One Time" program ("Additional Productivity Loss"). It will be incumbent upon any Landowner making this type of claim to advise the Company in sufficient time to allow for investigation of the matter and completion of the required samplings.

Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable Additional Productivity Loss provided that the Company is not responsible for installing GPS units or survey equipment if necessary ("GPS" option). In the event that the Landowner selects the GPS option, the Landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages. For greater clarity the following is an example of the calculation of Additional Productivity Loss:

- i) Third year crop loss under "One Time" Program = 50%.
- ii) Actual crop loss following investigation and sampling = 60%.
- iii) Difference payable to Landowner = 10%.

Crop Loss for topsoil storage Areas

Compensation for crop loss on topsoil storage areas will be as follows:

- In year of construction - 100% crop loss;
- In years after construction - measured crop loss;
- Payments will be based upon actual area used for topsoil storage;
- Compensation will not be prepaid;
- Compensation will be paid on an as incurred basis.

Speciality Crops

The one time payment does not apply to specialty crops. Specialty crops include tobacco, produce and registered seeds. Compensation will be negotiated on a site specific basis.

Post construction cover crop program

In addition to the one time payment, the Landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the Landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and Food. The cost of seed planted over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco or other specialty crops.

22. Woodlots and Windbreak/Hedgerow Trees

With respect to compensation for damage to woodlots, the Landowner will have the following two options:

Option 1:

Woodlots and hedgerow trees will be cut and appraised by a qualified forester retained by the Company. Evaluation of trees in woodlots will be based on the practice as outlined on Schedule 3.

Option 2:

The Landowner may accept the One Time Crop Loss and Disturbance Damage Payment in lieu of the woodlot evaluation.

With respect to compensation for damage to other wooded areas:

Tree plantations (Christmas trees and nursery stock) will be appraised separately. Compensation for trees evaluated in this manner shall be set out in Schedule 4 to this document.

Evaluation of aesthetic trees will be based on the practice outlined in Schedule 4.

The forester will contact the Landowner before entry on their property. Copies of appraisal reports will be made available to affected Landowners and payment will be made in accordance with the reports.

The Company reserves the right to use trees for which it has paid compensation. At the Landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.

23. Gored Land

The Company agrees to pay the Landowner 100 % crop loss on the gored land. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project.

24. Insurance

Upon request of the Landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.

25. Abandonment

Upon the abandonment of the pipeline in accordance with the terms and conditions of the easement, the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline has been installed. Without prejudice to any continuing right of the Landowner to Additional Productivity Loss, there shall be no additional compensation for crop loss to the Landowner

26. Liability

The Company will be responsible for damages to property, and equipment, resulting from construction operations, and will pay for repairs or replacement costs. The Company will be responsible, and indemnify the Landowner from any and all liabilities, damages, costs, claims, suits and actions except those resulting from the gross negligence or wilful misconduct of the Landowner.

27. Assignment

All rights and obligations contained in this agreement 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. The Company shall not assign this agreement without prior written notice to the Landowner and,

despite such assignment; the Company shall remain liable to the Landowner for the performance of its responsibilities and obligations in this agreement.

28. Site Specific Issues

Schedule 2 is to be used to identify any site specific issues which require special mitigation and compensation.

29. Compensation Levels

The levels of compensation applicable to your property are set out in Schedule 1 and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.

Dated at _____, Ontario this ____ day of _____, 2015.

UNION GAS LIMITED

Name & Title:

Dated at _____, Ontario this ____ day of _____, 2015.

Witness:

Landowner:

Landowner:

Landowner:

Landowner:

SCHEDULE 1: SETTLEMENT

Property No.: _____, Landowner(s): _____

The parties to this Letter of Understanding dated the ___ day of _____, 2015, in consideration of making this settlement have summarized below all the obligations, claims, damages and compensation arising from and for the required land rights and the pipeline construction across the Landowner(s)' property, namely _____.

(Check all applicable items of compensation)**NOTE: Refer to APPENDIX “C” within Option Agreements for site specific details**

Yes No

LAND RIGHTS

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Easement @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Temporary Land Use @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Topsoil Storage Land Use @	\$	per acre

DAMAGES

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Disturbance @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Disturbance @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Disturbance @	\$	per acre of Top Soil Storage area

CROP LOSS

<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$	per acre of Top Soil Storage area

NON-AGRICULTURAL DAMAGE PAYMENTS

<input type="checkbox"/>	<input type="checkbox"/>	Non-agricultural Lands @	\$	per acre
<input type="checkbox"/>	<input type="checkbox"/>	Woodlots @	\$	per acre

OBLIGATIONS

<input type="checkbox"/>		a) This Letter of Understanding.
<input type="checkbox"/>	<input type="checkbox"/>	b) Attached as Schedule 2 any other special requirements or compensation issues.

Initialed for identification by owner(s): _____.

Approval (Union Gas Limited): _____.

SCHEDULE 2: SETTLEMENT

Property No.: _____, Landowner(s): _____

SCHEDULE 3

WOODLOT EVALUATION

At the time of signing of the Letter of Understanding the Landowners with woodlots will be given 3 options.

1. take a one time full and final for the total easement.
2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately.
3. take the crop monitoring program and have the woodlot evaluated separately.

Woodlots will be assessed in the following manner:

A forestry Consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management.

This volume will then be determined on an annual basis.

Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot.

This value will then be present valued using the same formula as the one time payment option.

SCHEDULE 4

AESTHETIC TREE EVALUATION

The following procedure would be followed where a Landowner wishes to have trees on his property evaluated for aesthetic values.

During discussions for the Letter of Understanding, the Landowners would identify the trees he wishes to have evaluated for aesthetic purposes.

Union would contract a qualified person to complete an evaluation of the trees.

The Landowners would be paid the evaluated price for the trees in addition to other payments.

If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment.

If the Landowner disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation.

EVALUATION CRITERIA

A four part evaluation criteria will be completed for aesthetic trees:

Tree Value = Basic Value \times Species Rating \times Condition Rating \times Location Rating

Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area.

Species rating is a percentage rating based on the relative qualities of the tree species.

Condition rating is a percentage rating based on the health of the tree.

Location rating is a percentage rating based on the location of the tree.

SCHEDULE 5

Schedule of Rates for Work
Performed by Landowners

Typically all work will be done by the Company. If the parties agree that the Landowner will perform work on behalf of the Company, the Company will remunerate the Landowner in accordance with the following;

1. Stonepicking - \$10.00 per hour/per person picking by hand
- \$45.00 per hour for use of tractor and wagon
2. Chisel Plowing - \$70.00 per hour
3. Cultivation - \$50.00 per hour
4. Tile Inspection - \$20.00 per hour *

* Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.

SCHEDULE 6

Wet Soils Shutdown

The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.

While constructing the Company's pipeline the Company's senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e., can traffic be re-routed within the easement lands around wet area(s) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of the Company representatives, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse affects on the soils.

Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Union's inspection staff is responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. Where construction activities are undertaken by the Company in wet soil conditions, additional mitigation measures may be put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Union on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Union. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.

ATTACHMENT 9

Ontario Energy
Board

Commission de l'Énergie
de l'Ontario



EB-2005-0550

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 Union Gas Limited, pursuant to subsection 90(1), for an Order or Orders granting leave to construct natural gas pipeline and ancillary facilities in the Township of Strathroy-Caradoc in the Township of Middlesex Centre in the County of Middlesex.

BEFORE: Cynthia Chaplin
Presiding Member

Ken Quesnelle
Member

DECISION AND ORDER

Application and Proceeding

Union Gas Limited ("Union") applied on December 20, 2005 for an order of the Board granting leave to construct approximately 18.1 kilometres of 48 inch diameter steel natural gas pipeline in the County of Middlesex to expand the Trafalgar transmission system ("Strathroy to Lobo expansion"). The Application has been assigned Board File No. EB-2005-0550.

The proposed Strathroy to Lobo expansion will allow Union to increase the capacity of the Trafalgar gas transmission system to meet the increasing gas requirements for current and future customers. The proposed facilities will be constructed, owned and operated by Union; construction is planned to commence in the spring of 2007, and the pipeline will be in-service later that year.

The proposed pipeline will proceed from the existing Strathroy Gate Station, located at Lot 9, Concession IX, Township of Strathroy-Caradoc to the existing Lobo Station, located at Lot 14, Concession VII, Township of Middlesex Centre, all in the County of Middlesex. In addition to the construction of the pipeline, Union will install additional compression at Parkway and yard pipe modifications to tie-in at the Lobo compressor station; these are not part of Union's leave to construct application.

The Board issued a Notice of Application (the "Notice") on January 9, 2006. Union served and published the Notice as directed by the Board. The following parties were intervenors in the proceeding:

- GAPLO-Union (Strathroy Lobo) landowner group;
- Strathroy-Lobo Landowner Committee, a landowner group;
- Robert Alex Collins, landowner;
- Angela Mostrey, landowner;
- Mostrey Farms Limited, landowner;
- Enbridge Gas Distribution Inc. ("Enbridge");
- Sithe Global Power Goreway ULC ("Sithe"), power generator;
- Alberta Northeast Gas Limited ("ANE"), shipper and Union's customer;
- TransCanada PipeLines Limited ("TCPL"); and
- Aiken & Associates, energy consultant.

The Board received written submissions from several parties objecting to a written hearing. Upon considering these submissions the Board decided to proceed by way of an oral hearing.

Settlement Agreement

The Board convened a settlement conference to provide the parties with an opportunity to settle the disputed issues. GAPLO and Union were active participants in the settlement conference. A proposed settlement agreement was reached and was presented to the Board on May 9, 2006. The Board considered and approved the settlement agreement and adjourned the hearing as there were no other disputed issues in the proceeding.

The Board notes that the format used to present the proposed Settlement Agreement was a chart which had been used by the parties to organize issues, list impacts and record agreed upon mitigation measures for each issue and impact listed. The Board also notes that the chart had an entry headed 'Socio-economic' which, unlike the rest of the issues, had no mitigation measures recorded beside it. The parties advised that any issues related to that heading were the subject of a separate agreement which was not before the Board and which did not form part of the proposed Settlement Agreement. As a result, those impacts and issues were not before the Board, and the Board expressly makes no finding concerning them.

On May 16, 2006, Union filed a revised Letter of Understanding and a revised Form of Easement for Transmission Pipeline. Both of these documents reflect the settlement proposal.

Project Need

Union indicated that the need for the proposed Strathroy to Lobo expansion was determined entirely as a result of obtaining binding bids in two open seasons and executing M12 transportation contracts with 13 parties. The total new contracted demand is 509,142 GJ/d for terms of 10 years or more, all beginning November 1, 2007. According to Union, existing contracts and renewals for 2006/2007 indicate total continuing firm contract demand of 4,295,488 GJ/d, and the net additional demand starting November 1, 2007 is 499,143 GJ/d (one existing shipper turned back 10,000 GJ/d of capacity). The proposed Strathroy to Lobo expansion and additional compression at Parkway would increase system capacity by 492,175 GJ/d.

Union forecasted total system demand for both firm transportation and in-franchise service to be 6,535,326 GJ/day for 2007/2008. Union determined that the total physical capacity will be 6,444,863 GJ/d, which is comprised of the physical design day capacity of 5,805,444 GJ/d (including the Strathroy to Lobo expansion and additional Parkway compression) and 639,419 GJ/s in projected obligated deliveries at Parkway. Union proposed to meet the remaining shortfall of 90,463 GJ/day (from the projected demand of 6,535,326 GJ/d) by purchasing a service at Parkway.

Union confirmed that all the transportation agreements have been executed and provided a form of the Firm Transportation Contract in the pre-filed evidence. Union also provided a copy of the Financial Backstopping Agreement, which has been signed by each of the contracting shippers. This agreement protects Union in the event that a shipper fails to satisfy any of the conditions precedent and the transportation agreement becomes null after the incremental capacity has already been constructed. Union also indicated that it would conduct a new open season to identify transportation demand for 2008 season and stated that any unused capacity would likely be utilized in 2008.

Board Findings

The Board accepts Union's evidence regarding the incremental firm contracted demand and finds that Union has demonstrated the need for additional facilities to meet system requirements. The Board accepts Union's evidence that it will be able to meet the forecast in-franchise demand for both 2006/2007 and 2007/2008 through a combination of existing facilities, the proposed pipeline and ancillary facilities, and non-facility transportation options; namely obligated deliveries at Parkway and additional services at Parkway.

Facilities Design and Safety

Union's evidence was that the pipeline design specifications, including location factor, design factor, Maximum Allowable Operating Pressure, hydrostatic pipeline testing medium, duration and minimum test pressure, ratings for valves and flanges and minimum depth of cover, all meet or exceed the requirements of CSA Z662-03 in terms of facilities design and safety. The Technical Standards and Safety Authority (TSSA), which administers the CSA Z662-03 in Ontario, reviewed Union's evidence on design and safety of the facilities as part of the Ontario Pipeline Coordinating Committee (OPCC) review. There are no outstanding concerns raised by the TSSA or other parties with regard to CSA Z662-03 compliance.

Board Findings

The Board finds that design specifications for the proposed pipeline are in accordance with the CSA safety and design requirements.

Project Alternatives

Union considered one non-facility alternative, five single facility alternatives and ten combinations of facility alternatives before selecting the proposed project. Union considered the following facility options in combination or individually:

- Strathroy to Lobo pipeline;
- Parkway B compression,
- Bright C compression;
- Lobo C compression;
- Brantford to Kirkwall pipeline.

Union concluded that the non-facility option of contracting for additional services at Parkway would not provide sufficient additional capacity to meet the forecast need. Furthermore, Union concluded that individual physical alternatives are not viable as these do not provide sufficient incremental capacity to the system. Union compared the combinations of facilities on the basis of cost per unit of capacity and concluded that the proposed Strathroy to Lobo pipeline, in combination with additional compression at Parkway, provides the needed capacity for the lowest capital cost per unit of capacity.

Board Findings

The Board accepts Union's evidence regarding the analysis of alternatives and finds that proposed project is the appropriate alternative in terms of providing the necessary level of additional capacity at the least cost per unit of additional capacity.

Project Costs, Feasibility and Impact on Ratepayers

Union estimated the capital cost for the Strathroy to Lobo expansion at \$52.9 million. The estimated capital cost for the Parkway B compressor is \$48.4 million. Although Parkway B is not part of this application, costs for both the pipeline and Parkway B are included in the project specific cost of \$101.3 million for purposes of calculating project economics.

Union applied the three-stage economic feasibility analysis to assess the project, in accordance with the Board's recommendations from the E.B.O. 134 *Report on System Expansion*. Union's Stage 1 or "Discount Cash Flow" (DCF) analysis for the proposed facilities, over a 30 year time horizon and including the Strathroy to Lobo expansion and the Parkway B compressor project, indicated a cumulative NPV of \$13.1 million and a Profitability Index (PI) of 1.13. Union submitted that it did not conduct a Stage 2 "Cost/Benefit" analysis because of the high profitability of the project as determined in Stage 1. For the Stage 3 "Other Public Interest Considerations" evaluation, Union identified the benefits of enhanced security of supply, contribution to a competitive market, environmental benefits of gas as a clean fuel, increased employment and value of utility taxes.

Union's evidence included a comparison of the estimated cost per unit of length for the proposed Strathroy to Lobo expansion with the estimated cost for the approved pipelines from Brooke to Strathroy (18.2 km NPS 48) and Hamilton to Milton (17.1 km NPS 48). Union indicated that there are either small variances in cost or that larger cost variances are due to specific requirements of each particular pipeline.

Union's evidence indicated a small positive impact on the ratepayers. Union explained that these changes in rates reflect the cost of the proposed facilities combined with Union's proposed cost allocation methodology for 2007 (EB-2005-0520). Impacts on the rate payers were shown in comparison to the proposed rates for 2007. Union indicated an annual reduction of rates of \$1.09 for the average residential customer in the southern operations area and an annual reduction of \$3.60 for the average residential customer in the northern and eastern operations areas. Union indicated that its M12 customers would get a decrease in their demand charge of 0.007 \$/GJ (from 0.085 to 0.078) on Dawn to Parkway and a decrease of 0.005 \$/GJ on Dawn to Kirkwall (from 0.072 to 0.067).

Board Findings

The Board accepts Union's evidence and finds that the proposed expansion is economically feasible with the project specific PI of 1.13. The Board finds that the estimated costs of the expansion are reasonable in comparison to similar pipeline construction project costs. The Board notes that there will be no adverse impacts on Union's ratepayers.

Environmental Assessment

Stantec Consulting Limited prepared "A Route Selection and Environmental Impact Assessment" ("EA") in accordance with the Board's *Environmental Guidelines for Locating, Constructing and Operating Hydrocarbon Pipelines in Ontario (2003)* ("OEB Guidelines"). The EA report was prepared during the period 2001 to the end of 2005. The process of preparing the EA Report consisted of the following:

- delineation and analysis of the study area,
- identification and evaluation of route alternatives,
- input from the affected landowners and the public,
- the OPCC review,
- identification of potential impacts on physical, natural, agricultural and socio-economic features,

- study of cumulative effects, and
- development of specific mitigation, land restoration and monitoring measures.

The EA report concluded that no significant adverse environmental or socio-economic effects would remain upon implementation of recommended mitigation and monitoring measures.

The EA report was sent for the OPCC review on December 19, 2005. In addition to the members of the OPCC, the review included all affected municipalities and the St. Clair Region Conservation Authority. The public review of the EA report was facilitated in three public open houses held in November 2001, February 2002 and October 2005 in the vicinity of the proposed route. Union stated that the OPCC review was completed in accordance with the OEB Guidelines and that issues raised would be resolved by applying standard mitigation measures as described in the EA report and in the evidence.

Board Findings

The Board finds that Union conducted the routing and environmental assessment in accordance with the OEB Guidelines and that no outstanding issues remain. The Board notes that Union is committed to implementing all the mitigation and land restoration measures identified in the evidence and in the EA report, including those identified in the settlement proposal. The Board also finds that the land restoration and construction impact mitigation measures proposed by Union are acceptable.

Proposed Route

The preferred route was selected as part of the EA assessment and routing process and consisted of the five steps:

- Identify routing objectives and socio-economic constraints;
- Generate preliminary preferred route and route deviations
- Compare route deviations and evaluate preliminary preferred route
- Conduct public consultations; and
- Finalize location of preferred route.

According to the evidence, the main objective was to select the route which would take advantage of the existing Dawn Trafalgar system corridor. Evaluation of the alternative routes focused on easement, agricultural, socio-economic and bio-physical considerations. Public consultation provided comments on alternatives and those comments were taken into account when finalizing the location of the preferred route. The proposed route parallels the existing easement for its entire length.

Board Findings

The Board finds that Union followed the OEB Guidelines in selecting the proposed route and that the location of the proposed route within the existing pipeline corridor and parallel to the existing easement is acceptable from both the environmental and socio-economic perspectives.

Land Rights and Form of Easement Agreement

Union indicated that it required a permanent easement from 44 landowners and a temporary easement from 26 of these landowners in order to secure land rights for the construction and operation of the proposed pipeline. According to Union's evidence, all the easement agreements have either been obtained or will be obtained prior to the construction commencement.

Union negotiated with the landowners individually or through representatives of the two landowner groups, GAPLO and the Strathroy-Lobo Landowner Committee. Union successfully negotiated permanent and temporary land rights with a number of individual landowners and with the Strathroy-Lobo Landowner Committee members. These negotiations took part separately from the Board sponsored settlement conference.

GAPLO participated in the settlement conference which resulted in an agreement on a number of disputed issues between Union and GAPLO. The disputed issues were related to the mitigation of impacts and residual cumulative effects of the proposed pipeline construction and operation. Compensation for land rights to the landowners was also negotiated but was not part of the scope of the Board's proceeding. The settlement proposal, which was accepted by the Board, is reflected in a revised Letter of Understanding and in a revised form of Easement Agreement which Union filed with the Board and all intervenors on May 16, 2006.

Board Findings

The Board notes that the required permanent or temporary easements have either been acquired or are pending. The Board approves the form of agreement (the amended easement agreement) filed by Union and offered to all directly affected landowners along the approved route.

Other Permits and Approvals

Union stated that the following environmental permits are required prior to commencing construction of the proposed project:

- Permit to Take Water from the Ministry of the Environment;
- Work Permit from the Ministry of Natural Resources;
- Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Permit from St. Clair Region Conservation Authority;
- Authorization for works or undertakings affecting fish habitat from the St. Clair Conservation Authority, or Letter of Advice from the Department of Fisheries and Oceans, if elevated for review by the Conservation Authority to the Department.

Union stated that it would obtain these permits in the period between November 2006 and March 2007.

Board Findings

The Board accepts Union's evidence that it is in the process of, and is committed to, obtaining all permits required to construct, operate and maintain the proposed pipeline. The Conditions of Approval reflect these requirements.

Conclusion

Given the Board's findings on each of the specific areas above, the Board concludes that the proposed expansion is in the public interest and will grant the requested Leave to Construct, subject to the Board's Conditions of Approval attached as Appendix A to this decision.

- 10 -

IT IS ORDERED THAT:

Union Gas Limited is granted leave pursuant to section 90 of the *Ontario Energy Board Act, 1998* to construct 18.1 kilometres of 48 inch diameter steel natural gas and ancillary facilities in the Township of Strathroy-Caradoc in the Township of Middlesex Centre in the County of Middlesex, subject to the Conditions of Approval set forth in Appendix A.

DATED at Toronto, June 12, 2006

ONTARIO ENERGY BOARD

Original Signed By

Peter H. O'Dell
Assistant Board Secretary

Appendix A
To Decision and Order
EB-2005-0550
Conditions of Approval

**CONDITIONS OF APPROVAL
EB-2005-0550**

Union Gas Limited – TFEP 2007

1 General Requirements

- 1.1 Union Gas Limited shall construct the facilities and restore the land in accordance with its application and evidence, except as modified by this Order and these Conditions of Approval.
- 1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2007, unless construction has commenced prior to then.
- 1.3 Except as modified by this Order, Union Gas shall implement all the recommendations of the Environmental Study Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee (“OPCC”) review.
- 1.4 Union Gas shall advise the Board's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union Gas shall not make such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.

2 Project and Communications Requirements

- 2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Facilities.
- 2.2 Union Gas shall designate a person as project engineer and shall provide the name of the individual to the Board's designated representative. The project engineer will be responsible for the fulfilment of the Conditions of Approval on the construction site. Union Gas shall provide a copy of the Order and Conditions of Approval to the project engineer, within seven days of the Board's Order being issued.
- 2.3 Union Gas shall give the Board's designated representative and the Chair of the OPCC ten days written notice, in advance of the commencement of the construction.
- 2.4 Union Gas shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the Board's Order.

- 2.5 Union Gas shall file with the Board's designated representative notice of the date on which the installed pipelines were tested, within one month after the final test date.
- 2.6 Union Gas shall furnish the Board's designated representative with five copies of written confirmation of the completion of construction. A copy of the confirmation shall be provided to the Chair of the OPCC.
- 2.7 Where blasting is required, Union Gas shall follow its Standard Blasting Specifications and shall determine the locations of wells within 100 meters of blasting operations and shall test water quality of all wells within 100 meters before and after blasting operations.

3 Monitoring and Reporting Requirements

- 3.1 Both during and after construction, Union Gas shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within eighteen months of the in-service date. Union Gas shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.
- 3.2 The interim monitoring report shall confirm Union Gas' adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.
- 3.3 The final monitoring report shall describe the condition of the rehabilitated land and the effectiveness of the mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.
- 3.4 Within fifteen months of the in-service date, Union shall file with the Board a written Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and shall explain all significant variances from the estimates filed with the Board.

4 Easement Agreements

- 4.1 Union Gas shall offer the form of agreement approved by the Board to each landowner, as may be required, along the route of the proposed work.

5 Other Approvals

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

ATTACHMENT 10

ONTARIO ENERGY BOARD

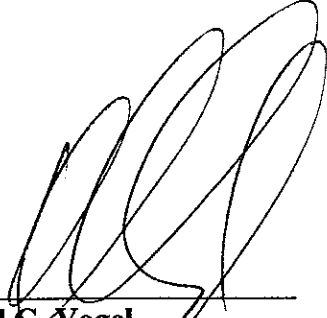
IN THE MATTER OF the *Ontario Energy Board Act*, 1998, S.O. 1998, c.15, Schedule B, and in particular, s.90(1) thereof;

AND IN THE MATTER OF an Application by Union Gas Limited for an Order or Orders granting leave to construct a natural gas pipeline and ancillary facilities in the Township of Strathroy-Caradoc and in the Township of Middlesex Centre, all in the County of Middlesex.

SETTLEMENT AGREEMENT

Subject to the approval of the Ontario Energy Board, GAPLO-Union (Strathroy-Lobo) and Union Gas Limited, by their solicitors, hereby agree to settle the issues between them in this proceeding in accordance with the Agreed Partial Mitigation Measures in Schedule 1 attached hereto. Landowner agreements shall be amended accordingly.

Dated at Toronto, Ontario
this 9th day of May, 2006.



Paul G. Vogel
Counsel for GAPLO-Union
(Strathroy-Lobo)



Glenn Leslie
Counsel for Union Gas Limited

**Schedule 1
GAPLO-UNION (STRATHROY-LOBO) v. UNION GAS
EB-2005-0550**

**PIPELINE IMPACTS
-and-
RESIDUAL EFFECTS
(Cumulative and Non-cumulative)**

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<p>Agricultural production and operations</p> <ul style="list-style-type: none"> • Soil mixing • Drainage • No freeze zone <p>Equipment size/cultivation depth</p>	<ul style="list-style-type: none"> • Decreased production/crop maturation/quality/whole farm price • Loss of drainage system efficiency • Limitations on higher value crops/specialty crops • Operational interference • Income loss • Decreased rental value • Diminished land value <ul style="list-style-type: none"> • Decreased efficiency/increased headlands • Increased compaction, crop loss, costs 	<ul style="list-style-type: none"> • WSSD – LOU and Schedules 1 and 5 to LOU to be modified as necessary: An independent construction monitor shall be appointed by GAPLO-Union (Strathroy-Lobo), the Company and Ontario Energy Board Staff. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to landowners and to be available to landowners and the Company at all times. The monitor shall file interim and final reports with the OEB. The joint committee shall be composed of one GUSL landowner, one other landowner and three representatives of the Company; WSSD issues shall be decided by the Joint Committee with assistance of the construction monitor as required. Where construction activities are undertaken by the Company in wet soil conditions (as determined by the monitor), the Company shall pay to the landowner 150% of disturbance and crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor).The 150% payment applies only once to any one area; on areas where the 150% payment is applied, the landowner forfeits the right to top-up of crop loss damages under the LOU. The 150% payment does not affect the landowner's right to topsoil replacement where crop loss exceeds 50%. <ul style="list-style-type: none"> • Depth of Cover – to replace the last sentence in Section 1(g) of the LOU - If the Company, acting reasonably, determines in consultation with the landowner and drainage expert that it is necessary to increase the depth of the pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, Union will provide for additional depth of cover. At the request of the landowner, the Company shall undertake a depth of cover survey of the Pipeline, and shall

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> • Stones • Construction access • Maintenance and repair interference/ damage 	<ul style="list-style-type: none"> • Annual stone-picking • Equipment damage • Interference with agricultural access • Aggravation of WSSD damage • Ongoing operational interference/loss of productive time and damage from maintenance and repair operations 	<p>provide its findings to the landowner. Where it is determined that cover over the Pipeline is less than three feet, Union shall restore depth of cover to three feet with the importation of topsoil or by lowering the pipe.</p> <ul style="list-style-type: none"> • Stone Picking Practice – Sections 1(k) and 1(m) to be modified as necessary – the second last sentence of Section 1(k) shall read – Stones 50 mm (2”) in diameter and larger will be picked by hand and/or with a mechanical stone picker. – Section 1(m) last two sentences are replaced with – If requested by the landowner, the Company will return in the year following construction and chisel plough or cultivate to the depth of the topsoil. When necessary to accommodate planting schedules, the landowners should perform cultivating and/or chisel ploughing themselves at the Company’s expense, provided the need for this work has been agreed upon in advance (see Schedule of Rates attached). The Company shall, at a time satisfactory to the landowner, pick stones 50 mm (2”) or larger in diameter by hand and/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones 50 mm (2”) or larger in the following years where there is a demonstrable need. • Maximum open trench 6 km. • Damage from pipeline operation – The Integrity Dig Agreement shall apply to all integrity and maintenance operations on whole Dawn-Trafalgar system.

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> • Cyst Nematode • Construction impact disputes 	<ul style="list-style-type: none"> • Contamination risk • Forum for landowner consultation on WSSD and efficient dispute resolution required 	<ul style="list-style-type: none"> • Cyst Nematode – at Section 8 of the LOU – In consultation with the landowner, the Company agrees to sample all agricultural easements along the pipeline route of this project, before construction, and any soils imported to the easement lands for the presence of soy bean cyst nematode (SCN) and provide a report of test results to the landowner. In the event the report indicates the presence of SCN, the Joint Committee will work with OMAFRA and the University of Guelph to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests. • Joint Committee – LOU and Schedule 1 to LOU to be modified as necessary – An independent construction monitor shall be appointed by GAPLO-Union (Strathroy-Lobo), the Company and Ontario Energy Board Staff. The monitor shall be on site continuously to monitor construction with respect to all issues of concern to landowners and to be available to landowners and the Company at all times. The monitor shall file interim and final reports with the OEB. The joint committee shall be composed of one GUSL landowner, one other landowner and three representatives of the Company. The Company will pay to the GUSL landowner member of the Joint Committee at his or her direction a total payment of \$10,000 plus G.S.T. as an honorarium for participation on the committee. • Assignment of the LOU – sentence to be added at the end of Section 11 of LOU – The Company shall not assign this agreement without prior written notice to the landowner and, despite such assignment, the Company shall remain liable to the landowner for the performance of its responsibilities and obligations in this agreement.
<p>Land use</p> <ul style="list-style-type: none"> • Agricultural 	<ul style="list-style-type: none"> • prevent construction/expansion existing facilities • restrict development intensive livestock/permitted uses • location limitations / inconvenience / costs 	<ul style="list-style-type: none"> • Easement Agreement: future use – To be inserted after Clause 3 of the easement agreement - The Transferee further agrees to make reasonable efforts at its own expense to accommodate changes in land use on lands adjacent to the easement for the purpose of ensuring the Pipeline is in compliance with all applicable regulatory requirements in connection with any such change in use.

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> • Non-agricultural 	<ul style="list-style-type: none"> • use interference with remaining lands • whole farm income loss • diminished whole farm land value • sterilize land – greenspace • limit development options/increase costs • diminish quality of life • whole property income loss • whole property diminished land value 	<ul style="list-style-type: none"> • Easement Agreement: future use – To be inserted after Clause 3 of the easement agreement - The Transferee further agrees to make reasonable efforts at its own expense to accommodate changes in land use on lands adjacent to the easement for the purpose of ensuring the Pipeline is in compliance with all applicable regulatory requirements in connection with any such change in use.
<p>Socio-economic</p> <ul style="list-style-type: none"> • social/psychological 	<ul style="list-style-type: none"> • loss of control over property/environment • violation of personal space • depression/anxiety • loss of enjoyment • diminished quality of life • loss of identification with community • lifetime challenge financially, emotionally and physically 	

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> • time loss • health and safety • abandonment risks 	<ul style="list-style-type: none"> • operational interference • production and income loss • family life disturbance • vulnerability/danger/risk • operational restrictions • decreased self-worth • liability • liability • environmental contamination • safety • land use restrictions 	<ul style="list-style-type: none"> • Depth of Cover – to replace the last sentence in Section 1(g) of the LOU - If the Company, acting reasonably, determines in consultation with the landowner and drainage expert that it is necessary to increase the depth of the pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, Union will provide for additional depth of cover. At the request of the landowner, the Company shall undertake a depth of cover survey of the Pipeline, and shall provide its findings to the landowner. Where it is determined that cover over the Pipeline is less than three feet, Union shall restore depth of cover to three feet with the importation of topsoil or by lowering the pipe. • Abandonment – to replace the last sentence in Clause 1 of the Easement Agreement, and Section 6.3 of the LOU to be modified as necessary – As part of the Transferee's obligation to restore the lands upon surrender of its easement, the Transferee agrees at the option of the Transferor to remove the pipeline from the Lands. The Transferee and the Transferor shall surrender the easement and the Transferee shall remove the Pipeline at the Transferor's option where the Pipeline has been abandoned. The Pipeline shall be deemed to be abandoned where: a) corrosion protection is no longer applied to the Pipeline, or, b) the Pipeline becomes unfit for service in accordance with Ontario standards. The Transferee shall, within 60 days of either of these events occurring, provide the Transferor with notice of the event. Upon removal of the Pipeline and restoration of the Lands as required by this agreement, the Transferor shall release Transferee from further obligations in respect of restoration. This provision shall apply with respect to all Pipelines in the Dawn-Trafalgar system on the Transferor's lands.

ATTACHMENT 11

**LETTER OF UNDERSTANDING
FOR LANDOWNERS ON THE PROPOSED
NPS 48 STRATHROY-LOBO PROJECT**

INTRODUCTION

It is the policy of Union Gas Limited ("the Company") that landowners affected by its pipeline projects be dealt with on a consistent basis that is fair to both parties. This Letter of Understanding represents the Company's commitment to that objective by providing a common framework within which negotiations for this project can take place. Union will therefore observe the following guidelines in its dealings with landowners on the NPS 48 Strathroy-Lobo Project ("the project").

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The following matters are addressed in this Letter of Understanding and its appendices and schedules all of which form a part hereof.

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1. PIPELINE CONSTRUCTION PROCEDURES

Prior to construction, Union's project manager or designated agent shall visit with each affected landowner to review the timing of construction and discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this agreement.

(a) Prior to installing the pipeline in agricultural areas, the Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. All topsoil stripped will be piled adjacent to the easement and temporary land use areas in an area approximately 10 metres (33') in width. The topsoil and subsoil will be piled separately and Union will exercise due diligence to ensure that topsoil and subsoil are not mixed. If requested by the landowner, topsoil will be ploughed before being stripped to a depth as specified by the landowner.

The Company will strip topsoil across the entire width of the easement at the request of the landowner, provided also that a temporary right to use any necessary land for topsoil storage outside the easement is granted by the landowner.

Further, if the landowner so requests the Company will not strip topsoil with the topsoil/subsoil mix being placed on the spoil side of the easement on top of the existing topsoil.

At the request of a landowner a mulch layer will be provided between the existing topsoil and the stripped topsoil pile in situations where a crop is not present.

At the landowners request, separation of distinct subsoil horizons such as blue and yellow clays shall be performed. Blue clays will be removed from the easement lands.

(b) The Company agrees to stake the outside boundary of the work space which will include easement, temporary work room, or topsoil storage areas. Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation. The stakes will be located at 30 metre (98.4 foot) intervals prior to construction. The intervals or distance between stakes may decrease as deemed necessary in order to maintain sight-lines and easement boundaries in areas of sight obstructions, rolling terrain or stream and road crossings. The Company will restake the easement limit for post construction tile work at the request of the landowner.

(c) On present and proposed agricultural lands, the Company will undertake appropriate survey techniques to establish pre-construction and post-construction grades with the view to restoring soils to pre-construction grade as reasonably practicable.

(d) The company will ensure all construction practices and appropriate environmental mitigation measures will be followed to ensure a proper clean up.

(e) Whenever possible, all vehicles and equipment will travel on the trench line.

(f) **The Company will not open more than 6.0 km. of trench line at a time.**

(g) The Company will install the pipeline with a minimum of 1.2 metres of coverage. **If the Company, acting reasonably, determines in consultation with the landowner and drainage expert that it is necessary to increase the depth of the Pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, Union will provide for additional depth of cover.**

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(h) At the request of the landowner topsoil will be over-wintered and replaced the following year. In these circumstances the Company will replace the topsoil such that the easement lands are returned to surrounding grade.

(i) During trench backfilling the Company will remove any excess material after provision is made for normal trench subsidence. The landowner shall have the right of first refusal on any such excess material. If trench subsidence occurs the year following construction, the following guidelines will be observed :

- (i) 0 to 4 inches - no additional work or compensation.
- (ii) Greater than 4 inches - the Company will strip topsoil, fill the depression with subsoil and replace topsoil. If it is cost effective the Company will repair the settlement by filling it with additional topsoil.

If mounding over the trench persists the year following construction, the following guidelines will be observed :

- (i) 0 to 4 inches - no additional work or compensation.
- (ii) Greater than 4 inches the Company will strip topsoil, remove excess subsoil and replace topsoil
- (iii) Should adequate topsoil depth be available, the mound can be levelled at the request of the Landowner

If the construction of the pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 4" level stated above, the Company will remove the restriction by one of the methods described above.

(j) If following over-wintering of the topsoil, return to grade and the establishment of a cover crop, there is identifiable subsidence in excess of 2 inches the Company will restore the affected area to grade with the importation of topsoil.

(k) The Company will also pick stones prior to topsoil replacement. The subsoil will be worked with a subsoiling implement, as agreed by the Company and the Landowner Committee. After topsoil replacement, the topsoil will be tilled with an implement(s) as agreed by the Company and the Landowner Committee. **Stones 50 mm (2") in diameter and larger will be picked by hand and/or with a mechanical stonepicker.** The subsoil on the easement will be tilled again as above.

(l) At the request of the landowner, the Company agrees to retain an independent consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoils and NPK (nitrogen, phosphorus, potassium) testing and testing of PH levels on and off easement after construction. Global Positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil.

(m) After the topsoil replacement, the topsoil will be tilled (see section k) and stones picked. If requested by the landowner, the Company will cultivate the topsoil or make compensating arrangements with the landowner to perform such work. This request by the landowner must be made during the pre-construction interview in order to be co-ordinated with the construction process. After

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cultivation, the Company will pick stones again. *If requested by the landowner, the Company will return in the year following construction and chisel plough or cultivate to the depth of the topsoil. When necessary to accommodate planting schedules, the landowners should perform cultivating and/or chisel ploughing themselves at the Company's expense, provided the need for this work has been agreed upon in advance (see Schedule of Rates attached).*

(n) All subsoils from road bores will be removed.

(o) The Company will repair and restore all field drainage systems and municipal drains impacted by construction to their original performance and will be responsible for remedy, in consultation with the landowner, of any drainage problem created by the existence of the pipeline. The Company will be responsible for any defects in the integrity and performance of tile installed or repaired in conjunction with construction, operation or repair, provided the defects are caused by the company's activities, faulty materials or workmanship. The Company guarantees and will be responsible forever for the integrity and performance of such tile as well as any other drain tile or municipal drain compromised by the company's activities, including future maintenance operations and problems caused by the company's contractors, agents or assigns. Where the landowner, acting reasonably, believes that there may be a drainage problem arising from the company's operations, the company will perform an integrity check on any tile construction/repair crossing the pipeline, and repair any deficiencies to the landowner's satisfaction.

All installations may be inspected by the landowner or his/her designate prior to backfilling where practicable. The company will provide the landowner or his/her designate advance notice of the tile repair schedule.

The company will retain the services of a qualified independent drainage consultant. The consultant will work with landowners to develop plans and installation methods and, if the plan is implemented, the consultant will certify that the construction accords with the plan. If prior to construction the company is provided with these plans prepared by the drainage consultant and approved in writing by the landowner, the company will install tile along the pipeline in the following situations:

1. In areas of numerous random tiles or systematic tiles that cross the pipeline easement, the Company will install header tiles (interceptor drains) adjacent to the easement as laid out in the plans. The downstream end of cut tile will be plugged. Such work will occur as soon as practicable, but prior to topsoil stripping operations. Any intercepted drains will be connected or plugged. The company will attempt to minimize the number of tile crossing the pipeline easement.
2. In areas where drainage problems will be created as a result of the easement, the drainage consultant will develop a tile plan to mitigate these impacts provided that the landowner is agreeable to any works required for this installation.
3. Should the pipeline construction program clear lands adjacent to existing pipelines and as a result create a newly cleared area large enough to farm, the company will, at the request of the landowner, develop a tile plan to drain the said area. The Company will install the tile in the newly cleared area, and install a drainage outlet that will enable the implementation of the said tile plan provided the cost of such work does not exceed the present value of the net crop revenue from the said area. The

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present value shall be calculated using the same crop value and discount rate used in the one time crop loss compensation calculation. The net crop revenue shall be derived by reducing the crop value by a negotiated input cost. The Company will accept drainage design solutions that include the use of a motorized pump, if the landowner releases the Company from all future operation and maintenance responsibilities for said pump. The Company will accept drainage design solutions that include outlet drains crossing adjacent properties, if the landowner obtains necessary easements or releases fully authorizing said crossings.

4. Drainage laterals will be installed after construction of the pipeline to provide easement drainage. Lateral and cross-easement tiles will be installed in the construction year as weather permits.

5. Other areas recommended by the drainage consultant.

If random tiles are encountered during construction they will be staked and capped, unless temporary piping is installed to maintain flow.

The Company will do the following to accommodate planned and future drainage systems in the Company's drainage and pipeline design. The Company will incorporate any professionally designed drainage plans obtained by the landowner for future installation. If the landowner intends to install or modify a drainage system but has not yet obtained professionally designed plans, the Company will hire a drainage consultant to develop an Easement Crossing Drainage Plan in consultation with the landowner.

In areas where topsoil has been stripped, and at the request of the landowner, the company will complete post-construction tile installation and repairs prior to topsoil replacement.

The installation of tile shall be performed by a licensed drainage contractor. The company will consult with the landowner committee and mutually develop a list of acceptable tile drainage contractors to be used during construction. Header tiles will be installed using a trench method to ensure that all field tile are located and connected as required by the tile plan.

The company will provide the landowner with the most recent specifications concerning tile support systems for existing tile across the trench. The method of support will be agreed upon between the landowner and the company's drainage consultant during the pre-construction visit.

The company will provide the landowner with a copy of as-built drainage plans.

(p) Company will, unless otherwise agreed to with the landowner, ensure any water which may accumulate on the easement during construction will be released into an open drain or ditch, but not in a tile drain. This may, however, be accomplished through the installation of temporary tile. The Company will provide the landowner with a proposed temporary tiling plan for review. If the Company pumps into an existing tile with the landowner's permission, the water will be filtered.

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(q) The Company shall replace or repair any fences which are damaged by pipeline construction in a good and workmanlike manner. In addition, the Company will reset any survey monuments which are removed or destroyed during pipeline construction.

(r) It is understood that the Company is required to adhere to all of the conditions set out in the Leave to Construct Order of the Ontario Energy Board and that the foregoing are additional undertakings that the Company has agreed upon with the landowners on the project. A copy of the conditions will be mailed to each landowner as soon as it is available.

(s) The landowner will execute a Clean-up Acknowledgment when he/she is satisfied with the clean-up operations described in Paragraph 1, (h) through (q). It is suggested that any tenant(s) who are affected by construction accompany the landowner to inspect the clean-up prior to execution of the Clean-up Acknowledgment. The Landowner Committee will be provided, for review, the form of documents required for landowner execution.

(t) Where private water or utility lines are planned to be interrupted, the Company will supply temporary service to the affected landowners prior to service interruption. In the case of accidental interruption, temporary services will be provided by the Company at the earliest possible opportunity.

(u) Where requested by the landowner, the Company will leave plugs for access across the trench to the remainder of the landowner's property during construction. Following construction, the Company shall ensure that the landowner shall have access across the former trench area and easement. Upon request of the landowner, the Company shall create a gravel base on filter fabric across the plug(s) and will remove same at the further request of the landowner.

(v) The Company, including its employees, agents, contractors and sub-contractors, will not use any off-easement culverts incorporated into Municipal Drains to provide access to the easement. Further, the Company will not use any laneway or culvert of the landowner without the landowner's prior written consent. In the event of such use, the Company will, at its own expense, repair any damage and compensate the landowner accordingly. The Company agrees to monitor and maintain private driveways that cross the easement for a period of 18 months after construction.

(w) The Company agrees that construction activities will not occur over the off-easement areas without the written permission of the landowner. The Company agrees that it will pay for damages caused by construction/operations activities in the event that such off easement damages occur.

(x) The Company's Landowner Complaint Tracking system shall be available to landowners for the proposed construction.

(y) The Company shall pay the costs of independent consultants satisfactory to both the landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following:

- (i) The need for topsoil importation as in Clauses 1 i) hereof, respecting the existence of identifiable subsidence,

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- (ii) The need for topsoil importation as in Clause 1 (z) hereof, respecting the establishment of crop losses in excess of 50%,
- (iii) The establishment of levels of compensation for specialty crops as in clause 5.2 hereof.
- (iv) resolution of future crop loss claims under s.5.2 (a) hereof.

In addition, in the event that a dispute arises between a landowner and the Company and such dispute cannot be resolved to the mutual satisfaction of the parties through discussion or referral to the joint committee established pursuant to Para. 1(d)(d) and Schedule 1 hereof, the Company may retain a mutually satisfactory independent consultant to assist in the resolution of the particular dispute.

(z) The Company will import 3 inches of topsoil to remedy any areas affected by construction that have crop losses in excess of 50 % in the fifth year following construction to be distributed in accordance with the following protocol regardless of the cause of the loss and without prejudice to the landowner's continuing right to compensation for losses in excess of those compensated for.

- (i) The Company will regrade the total width of the easement, including the designated area to level any ruts;
- (ii) The Company will import a quantity of topsoil equivalent to three (3) inches times the total area of the Land experiencing greater than 50% crop loss (the "affected area"). The topsoil will be of a quality described in subsection (bb), dry and tested for the presence of soybeans cyst nematode;
- (iii) The Company will spread the imported topsoil uniformly over the affected area to a maximum depth of three (3) inches on the affected area or as otherwise agreed to by the Landowner and the Company in a manner so as to not adversely affect the natural drainage of the Land or adversely impact on normal farming operations .

Alternatively, at the option of the landowner, if there is greater than 50% crop loss after five years, Union will retain an independent soils consultant satisfactory to both parties to develop a prescription to rectify the problem. This may include the importation of topsoil.

(aa) The Company will perform compaction testing on and off the easement before and after topsoil replacement and provide the results to the landowner. Unless there is an agreement to the contrary, the Company will remediate any residual compaction in the subsoil prior to return of topsoil.

(bb) Any imported topsoil shall be natural, cultivated, medium loam, neither clay or sandy in nature, capable of heavy agricultural growths and be from a source approved by the landowner.

(cc) The Company will provide a copy of this Letter of Understanding and the environmental reports to the construction contractor.

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(dd) The Company agrees to implement one joint committee for the NPS 48 Strathroy-Lobo Project under the terms of reference agreed to in Schedule 1 hereof.

(ee) The Company will ensure suitable passage and land access for agricultural equipment during construction.

2 LIABILITY

The Company will be responsible for damages to property, equipment, and loss of time resulting from construction operations, and will pay for repairs or replacement costs. The Company will be responsible, and indemnify the landowner from any and all liabilities, damages, costs, claims, suits and actions except those resulting from the gross negligence or willful misconduct of the landowner.

3. WATER WELLS

To ensure that the quality and quantity (i.e. static water levels) of well water is maintained, a pre, during and post construction monitoring program will be implemented for all drilled wells within 100 metres of the proposed pipeline, for all dug wells within 100 metres and for any other wells recommended by the Company's hydrogeology consultant. All samples will be taken by the Company's environmental personnel and analyzed by an independent laboratory. Their report will be made available to the landowner on or before the filing of the final post-construction monitoring report.

Should a well be damaged (quantity and/or quality) from pipeline installation/operations, a potable water supply will be provided and the water well shall be restored or replaced as may be required.

4. LAND RIGHTS

Land rights required for the pipeline construction include permanent interests such as pipeline easements (i.e. a limited interest in the affected lands) and may also include temporary land use agreements. The Company agrees that it will not surrender any of its permanent rights or be released from any of its obligations in the easement lands unless an agreement to the contrary has been made with the landowner. In making payment for land rights directly to the registered owner of the affected lands, the owner is responsible to ensure his/her tenant is aware of the terms of the easement or temporary land use agreement and this Letter of Understanding.

Consideration for land rights will be based on appraised market value of the affected lands. In determining the appraised market value, independent accredited real estate appraisers are retained by the Company who must observe the standards established by the Appraisal Institute of Canada. If agreement on the consideration for land rights cannot be reached, the Company will pay for a second report by a qualified appraiser who is chosen by the landowner provided the appraiser and the terms of reference for the appraisal report are mutually acceptable to the landowner and the Company. If consideration for land rights still cannot be agreed upon, the matter would be determined at a compensation hearing and the Company's offers would not prejudice either parties' presentation at the hearing.

4.1 EASEMENTS

Pipeline easements convey a limited right in an owner's land for the construction, operation, maintenance and repair of a pipeline. The owner retains title to the right-of-way lands with a

restricted right to use the easement. The Company will pay a consideration for easements based upon 100% of the appraised market value of the lands required which includes a premium as an incentive for settlement. Payments for easements will be made in one lump-sum or will be amortized over 10 years using the current Canada Savings Bond (CSB) rate, at the option of the landowner.

4.2 TEMPORARY LAND USE AGREEMENTS

Consideration is also paid for temporary use of landowners' property required in connection with the project. This lump sum payment for use of these lands is based upon 50% of the appraised market value for agricultural lands. Payment for Disturbance damages will also be made on the basis of 50 percent of the values described in 5.1 below and Appendix "A" hereto. The Comparative Crop Option and One Time Payment with Cover Crop Option 5.2 below is available for temporary land use lands in agricultural areas. For non-agricultural or development lands, an annual payment is offered based on the market value multiplied by the current CSB rate. Temporary land use will be required for at least a two year period, being the year of construction and the following year to allow for clean-up and restoration activities. Should activities extend beyond the two year period, payment will be negotiated on an annual basis. Although every effort will be made by the Company to identify temporary land use areas required, in certain instances either before or during construction, additional temporary land use may be identified and compensation will be as outlined above. Temporary land use payments do not include those lands used for top soil storage adjacent to the right-of-way which is compensated on the following basis:

(a) *minimum area equivalent to 36% of the easement area (payable before construction):*

(i) 50% of appraised market value for agricultural land

(ii) disturbance damages (as a component of easement disturbance damages as described in s.5.1 and Appendix "A" hereto)

(iii) crop loss (100% damages for crop destroyed during construction and future loss "as incurred" in accordance with s.5.2(a) and Appendix "A" hereto)

(b) *additional topsoil storage in excess of 36% of easement area (payable after construction):*

(i) (as above)

(ii) actual area of topsoil storage x 50% of appraised market value of agricultural land minus disturbance payment for topsoil storage paid in easement disturbance prior to construction

(iii) (as above)

5. DAMAGE PAYMENTS

Compensation for damages can be grouped under two headings, namely, Disturbance Damages, which are paid at the time easements and temporary land use agreements are executed, and Construction Damages, which are paid either before or after construction is completed. Disturbance and Construction damage payments will apply to both easement and temporary land use and will be based upon the areas of the proposed pipeline easement and temporary land use.

5.1 DISTURBANCE DAMAGES

Disturbance Damages are intended to recognize that pipeline construction will result in some unavoidable interference with active agricultural operations and certain other uses of affected lands. This may include lost time due to negotiations and construction, inconvenience to the farming

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operations, restricted headlands, interrupted access, extra applications of fertilizer, temporary storage of top soil off easement. Other land uses may qualify for Disturbance Damages which are site-specific in nature and recognize the particular circumstances of the use being interfered with. Union will negotiate with the affected owner to address these site-specific issues.

5.2 CONSTRUCTION DAMAGES

(a) CROP DAMAGE

There are two options available to landowners for compensation of crop damage. A Comparative Crop Program, or a One Time Payment program with a Cover Crop Option. These are described below.

OPTION ONE: Comparative Crop Program

In the "Comparative Crop Program" the Company will monitor crop yields on and off right-of-way to compensate for any reduction in yield which is attributable to the pipeline construction and any related effects (i.e. thermal effect) and will follow a damage claim settlement program as follows:

First Year (Construction Year) - Pay 100% of crop damage on all permanent and temporary easements, topsoil storage areas, gored areas and adjoining affected lands.

Second to Fifth Year - The crop loss compensated applies only to easements and temporary land use areas. It will be based on results obtained from a consulting agronomist retained by the Company; any other testing must be approved by the Company . The agronomist will determine any difference in crop yields on and off the easement/temporary land use areas (percent crop loss) and the Company will compensate for such crop losses at prevailing rates.

Sixth Year - In the sixth year, at the landowner's discretion in consultation with the Company, the "Comparative Crop Program " may remain in effect, or the landowner may offer to accept a lump sum payment from the Company, and the landowner will sign a Full and Final Release. The lump sum payment will be the sixth year percent crop loss plus net present value of future years' losses. Net present value of future years' losses will be based on the percent crop loss in the sixth year multiplied by the average price per acre on crops grown in the prior six (6) year period divided by the current CSB rate. For example:

$$\text{Present Value} = \frac{\text{Payment}}{\text{Interest}} \quad \text{Thus, Lump Sum} =$$

$$(\text{Sixth Year \% Crop Loss}) +$$

$$\frac{(\% \text{ Crop Loss} \times \text{Average Crop Price Per Acre} \times \text{Acreage})}{\text{CSB Rate}}$$

Example: 20% crop loss over 1 acre area; average crop price \$300/acre

$$(.20 \times \$300.00 \times 1.0) + \frac{.20 \times \$300.00 \times 1.0}{.105} = \$631.43 \text{ (Lump Sum Payment)}$$

It is understood and agreed that landowners will use good farming practices in the cultivation of their lands to mitigate any ensuing damages to the best of their ability. The Company will provide crop restoration recommendations following the completion of construction to assist landowners in rehabilitating the affected lands and will compensate them for any expenses over and above normal farm management of the easement while carrying out these recommendations. Where a landowner

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has followed these recommendations to the best of their ability, and is still participating in the "Comparative Crop Program " the Company will, at its expense, retain agricultural specialists to offer advice and assistance in restoration procedures.

If the landowner chooses the Comparative Crop Program, the Company will also monitor and compensate for any decrease in the price obtained for the whole field crop as a result of differences in grade, quality, condition or moisture content between the crop on the whole Dawn-Trafalgar right-of-way and the crop off right-of-way but this provision shall not apply if the One Time Payment Program is chosen.

Pasture Lands - If the affected lands are being used for pasture, the landowner may wish to select the following option in lieu of the 5 year crop monitoring described above. Any unbroken pasture area involved will be reseeded by the Company or on mutual agreement, by the landowner who will be compensated for the reseeding. Pasture area will be paid at 100% loss for a two year term, being the construction year and the year following construction to allow the affected area to establish growth. At the end of the two year period, if the pasture has been established, a Full and Final release will be requested from the landowner. If the pasture has not yet been established, compensation will continue to be paid at 100% loss until such time as the pasture has been established, at which time a Full and Final Release will be signed by the landowner.

OPTION TWO: One Time Payment With Cover Crop Option

As an alternative to the foregoing damage programmes, the Company will offer landowners a one-time settlement on the area of the permanent easement and temporary land use areas, for a Full and Final Release on future crop loss, trees, stone picking beyond the year following construction, cover crops, inspection, consulting time and general damages of any nature whatsoever. Payment is normally made after construction but can be made at the time easement agreements are executed. Notwithstanding that the landowner will have executed a Full and Final Release for crop damages either before or after construction, should productivity loss exceed the percentages paid through the "One Time" Program in any year following construction and the landowner has not been (or is not being) compensated for crop loss under the terms of an existing crop loss compensation program with the Company, the Company will reimburse the landowner for the difference calculated by applying the percentage loss to the landowner's actual gross return in the year and deducting the compensation received for that year under the " One Time " program. It will be incumbent upon any landowner making this type of claim to advise the company in sufficient time to allow for investigation of the matter and completion of the required samplings. Alternatively, at the option of the Landowner, upon provision of advance notice to the Company to permit opportunity for inspection, GPS data may be utilized to establish yield reductions for the purpose of any applicable " top up ", provided that the Company is not responsible for installing GPS units or survey equipment if necessary. In the event that the landowner selects this option, the landowner must provide all necessary GPS documentation related to the entire farm field in question, including, but not limited to, maps, computer print-outs and formula to determine field averages.

Example Third year crop loss under "One Time" Program = 50%.

Actual crop loss following investigation and sampling = 60%.

Difference payable to landowner - 10%).

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For any land used outside the permanent easement, the Company will pay 100% damages for any crops destroyed during the construction year and pay damages for future crop loss on an "as incurred" basis.

This option does not apply to specialty crops. Damages to specialty crops, i.e. tobacco, produce, registered seed variety, will be reviewed and compensation negotiated on a site specific basis and paid on a yearly basis as a specialty crop rotation.

In addition to the one time payment, the landowner may request a cover crop rehabilitation program for cultivated lands. Under this program the landowner will plant alfalfa/sweet clover or other restoration crops approved by the Company on the easement and his/her normal crop in the remainder of the field for up to three years. The initial cost of tillage and planting will be paid by the Company as determined by "Economics Information", published by the Ministry of Agriculture and Food. The cost of seed planted over the easement will be compensated upon presentation of an invoice for same. This cover crop program does not apply for tobacco crops.

(b) WOODLOTS AND HEDGEROW TREES

All woodlots and hedgerow trees to be cut will be appraised by a qualified forester retained by the Company. The forester will contact the landowner before entry on their property. Copies of appraisal reports will be made available to affected landowners and payment will be made in accordance with the reports.

If requested by the landowner, evaluation of trees in woodlots will be based on the accepted practice as outlined on Schedule 1 hereto.

The evaluation of trees for aesthetic values, will be carried out by qualified professionals according to standard principles as outlined in Schedule 2 hereto. Compensation for trees evaluated in this manner shall be set out in Appendix "B" to this document.

Union reserves the right to use trees for which it has paid compensation. At the landowner's request, any remaining logs will be cut into 10 foot (3.05 metre) lengths, lifted and piled adjacent to the easement.

As an alternative to the forester's appraisal, the landowner may accept "Option Two: One Time Payment" (see page 13) in lieu of the woodlot evaluation.

Tree plantations (Christmas trees and nursery stock) will be appraised separately.

Prior to the start of construction, the following options will be discussed with the landowner, and the most appropriate option selected:

Option 1: The land will be completely cleared for construction with all stumps and brush removed so that the land can be cultivated.

Option 2: At Union's expense, all vegetation on the construction area will be cut with brush cutters or sprayed regularly so that brush or trees will not grow again.

Option 3: Union will maintain a 6 metre strip over the pipeline which will be kept clear by cutting the brush or spraying. The remainder of the easement will be allowed to reforest naturally or can be reforested by the landowner.

The Company has established a policy to replant twice the area of trees to those which are cleared for pipeline projects. Landowners whose woodlots are to be cleared may apply in writing to the Company should they wish to participate in this programme. Tree seedlings will be replanted on the right-of-way or within the landowner's property using species determined in consultation with the landowner. Replanting must be done in accordance with the Company's policies regarding tree planting on easements so that a 6 metre strip centred on the pipeline is left open for access to the pipeline.

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For hedgerows the Company will implement the following practice: If a tree in excess of six (6) feet is removed a six (6) foot replacement tree will be supplied; if a tree less than six (6) feet in height is removed, a similar sized tree will be supplied. The Company will warrantee such trees for a period of three years following planting, provided the landowner waters the tree as appropriate after planting.

The only exception to the non-planting of the 6 metre strip is that with permission, trees may be planted as a crop (nursery stock), provided that no tree is permitted to grow higher than 2 metres in height, and the species are of a shallow rooting variety. The use of hydraulic spades within the 6 metre strip is prohibited.

(c) GENERAL MATTERS FOR DAMAGES

As damage payments are made directly to the registered landowner, the landowner is responsible for making any compensation to his/her tenant for any matters included in the damage payment from the Company.

The Landowner(s) in consideration of this settlement, covenants and represents that this settlement and the relevant easement agreement or option for easement, as the case may be will be made known to any occupant, tenant or lessee of their lands.

Where damage settlements cannot be negotiated, the Company or the landowner may apply to the Board of Negotiation or Ontario Municipal Board to settle unresolved claims. It is further understood and agreed that the landowner's executing our easement, is without prejudice to his/her position in negotiation of damages following construction of the pipeline and the aforementioned settlement arrangements will be in full effect.

6. POST-CONSTRUCTION AND PIPELINE OPERATIONS ISSUES

6.1 WEED AND BRUSH CONTROL IN NON-CULTIVATED AREAS

The pipeline easement through woodlots will be brushed out on a regular basis either within a 6 metre strip centred over the pipeline or across the full width of easement which was initially cleared for construction. The width of clearing will be discussed with landowners prior to work commencing.

At the choice of the landowner, the easement can be replanted with trees provided no planting takes place within a 6 metre strip centred over the pipeline. Landowners are reminded that the company must be notified five days prior to any excavation taking place on the easement and that such excavation must be under the direction of a Company inspector, in accordance with the easement agreement.

The Company will work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after discussion with the landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.

6.2 DAMAGES FROM PIPELINE OPERATIONS

Prior to scheduled excavation for maintenance work, top soil shall be stripped and piled separately from subsoil.

Pipeline maintenance shall be scheduled to accommodate crop planting, growing and harvesting, however, in the event maintenance work results in crop damage, Union shall negotiate crop damage settlements.

Any work on existing pipelines will be carried out using current practices.

The Integrity Dig Agreement shall apply to all integrity and maintenance operations on the whole Dawn-Trafalgar system.

6.3 ABANDONMENT

Upon the abandonment of the pipeline (*as determined by the Easement*), the affected lands shall be returned as close as possible to its prior use and condition with no ascertainable changes in appearance or productivity as determined by a comparison of the crop yields with adjacent land where no pipeline was installed, provided that there shall be no additional compensation for crop loss to the landowner under the Comparative Crop Program 5.2 (a) OPTION ONE or the One-Time Payment with Cover Crop OPTION TWO but without prejudice to any continuing right of the landowner to “top up” compensation pursuant to the provisions of Section 5.2 (a) hereof.

The Company, in consultation with the landowner or third parties as required, will determine a reasonable and appropriate course of action to rectify any deficiencies.

6.4 DEPTH OF COVER

At the request of the landowner, the Company shall undertake a depth of cover survey of the Pipeline, and shall provide its findings to the landowner. Where it is determined that cover over the Pipeline is less than three feet, The Company shall restore depth of cover to three feet with the importation of topsoil or by lowering the pipe.

6.5 STONEPICKING

The Company shall, at a time satisfactory to the landowner, pick stones 50 mm (2”) or larger in diameter by hand/or with a mechanical stone picker in each of the first two years following construction. The Company shall, at a time satisfactory to the landowner, return to pick stones 50 mm (2”) or larger in the following years where there is a demonstrable need.

7. GORED LAND

The Company agrees to pay landowners the 100 % annual crop loss component as provided in the One Time Payment with Cover Crop Option hereof, or in the case of specialty crops as provided in Clause 5.2 hereof for agricultural lands rendered not useable as a result of the construction of the pipeline and clean-up following construction.

8. TESTING FOR SOY BEAN CYST NEMATODE

In consultation with the landowner, the Company agrees to sample all agricultural easements along the pipeline route of this project, before construction, and any soils imported to the easement lands for the presence of soy bean cyste nematode (SCN) and provide a report of test results to the landowner. In the event the report indicates the presence of SCN, the Joint Committee will work with OMAFRA and the University of Guelph to develop a best practices protocol to handle SCN when detected and will employ the most current best practice at the time of construction. The Company will also test for SCN whenever it is conducting post-construction soil tests.

9. INDEPENDENT CONSTRUCTION MONITOR

An independent construction monitor shall be appointed by GAPLO-Union (Strathroy – Lobo), the Company and Ontario Energy Board Staff. The monitor shall be on site continuously to

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monitor construction with respect to all issues of concern to landowners, and shall be available to the landowners and the Company at all times. The monitor shall file interim and final reports with the Ontario Energy Board.

10. INSURANCE

Upon request by the landowner, the Company will provide insurance certificates evidencing at least five million dollars in liability insurance coverage.

11. COMPENSATION LEVELS

The levels of compensation applicable to your property are set out in Appendix "A" and are based upon the criteria set out above. Kindly sign the second copy of this Letter of Understanding and initial all Appendices to indicate your acceptance of our arrangements.

12. ASSIGNMENT

All rights and obligations contained in this agreement 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.

The Company shall not assign this agreement without prior written notice to the landowner and, despite such assignment, the Company shall remain liable to the landowner for the performance of its responsibilities and obligations in this agreement.

Yours very truly,
UNION GAS LIMITED

Manager, Lands Department

Dated at _____, Ontario this _____ day
of _____, 20_____.

Witness:

(
(_____
(Landowner
(
(
(_____
(Landowner

NPS 48 STRATHROY-LOBO Pipeline

APPENDIX "A": SETTLEMENT

Property No. _____, Landowner(s): _____

The parties to this Letter of Understanding dated the ___ day of _____, 2003, in consideration of making this settlement have summarized below all the obligations, claims, damages and compensation arising from and for the required land rights and the pipeline construction across the Landowner(s)' property, namely _____.

(Check all applicable items of compensation)Yes NoLAND RIGHTS

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Easement @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Temporary Land Use @	\$	per acre.
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Topsoil Storage Land Use @	\$	per acre. (36% Easement Area)
<input type="checkbox"/>	<input type="checkbox"/>	(d)	Topsoil Storage Land Use @	\$	per acre (for area exceeding 36% of Easement Area) Determined and Payable after construction

DAMAGES

<input type="checkbox"/>	<input type="checkbox"/>	(a)	Disturbance @	\$	per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	(b)	Disturbance @	\$	per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	(c)	Disturbance		As outlined in s.4.2 for Topsoil Storage Area exceeding 36 % of Easement Area Determined and Payable after construction

(d) Crops

<input type="checkbox"/>	<input type="checkbox"/>	Comparative Crop Program:	(See section 5.2(a))
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$ per acre of easement.
<input type="checkbox"/>	<input type="checkbox"/>	One Time Payment @	\$ per acre of Temporary Land Use
<input type="checkbox"/>	<input type="checkbox"/>	Cover Crop Program:	(See section 5.2(a) – typically decision made after construction
<input type="checkbox"/>	<input type="checkbox"/>	Top Soil Storage	Measured Crop Damage per acre (100% loss in year of construction) If and as incurred in years after construction

OTHER (IN LIEU OF “ ONE TIME ”)

<input type="checkbox"/>	<input type="checkbox"/>	(d)	Pasture Lands @	(See OPTION ONE – Comparative Crop Program)
<input type="checkbox"/>	<input type="checkbox"/>	(e)	Woodlots	(See section 5.2(b))

OBLIGATIONS

<input type="checkbox"/>	a)	This Letter of Understanding.
<input type="checkbox"/>	b)	Attached as Appendix "B" any other special requirements or compensation issues.

Initialed for identification by owner(s): _____.

Approval (Union Gas Limited): _____.

NPS 48 STRATHROY-LOBO Pipeline

APPENDIX "B" SETTLEMENT

Property No.: _____, Landowner(s):

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SCHEDULE 1

Landowner Relations and Terms of Reference of Joint Committee

In addition to Wet Soils Shutdown issues, the Joint Committee's purpose is to:

- i) provide a mechanism to address issues/concerns that arise during and following construction including concerns related to wet soil shutdown decisions made by the Company;
- ii) provide a brief overview of issues/concerns raised during and following construction; and,
- iii) consider which items should be included in a Post Construction Report.

The objective of the Joint Committee is to provide:

- i) a vehicle to address issues/concerns which arise during and following construction;
- ii) deal with any unforeseen circumstances which may arise during or following construction; and,
- iii) an opportunity for landowners to comment on how Union might improve future construction practices.

In reviewing the foregoing, the types of issues which may be addressed are as follows:

- i) landowner concerns that arise during and following construction;
- ii) unusual or unanticipated impacts of the construction process which show up only after construction is completed;
- iii) methods of anticipating and avoiding these circumstances in the future; and,
- iv) review of ongoing construction practices and procedures which in the view of the landowners might be improved in future construction.

Duration of the Joint Committee

- i) The Joint Committee shall be formed during the year of construction in advance and prior to the commencement of construction. The landowners shall be responsible for recruiting the landowner members and advising the Company thereof. The Committee shall continue for a period of two (2) years from the date of commencement of construction and so long thereafter as the Committee determines is necessary.

Committee Make-Up

- i) Members shall be affected landowners, and appropriate representatives of the Company.
The Joint Committee shall be composed of one GUSL landowner, one other landowner and three representatives of the Company;

Payment to Landowner members

- i) The Company will pay to the **GUSL landowner member of the Joint Committee at his or her direction a total payment of \$ 10,000 plus G.S.T. and the same amount to the other landowner member** as an honorarium for their participation on the committee.

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WOODLOT EVALUATION

At the time of signing of the Letter of Understanding the landowners with woodlots will be given 3 options.

1. take a one time full and final for the total easement.
2. take a one time full and final for that portion of the easement in agricultural land, and have the woodlot evaluated separately.
3. take the crop monitoring program and have the woodlot evaluated separately.

Woodlots will be assessed in the following manner:

A forestry consultant will cruise the woodlot to determine the amount of volume which could be harvested on a periodic basis from the woodlot under sustained yield management.

This volume will then be determined on an annual basis.

Current sale prices will then be given to this volume to determine an annual amount which could be harvested from the woodlot.

This value will then be present valued using the same formula as the one time payment option.

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SCHEDULE 3

AESTHETIC TREE EVALUATION

The following procedure would be followed where a landowner wishes to have trees on his property evaluated for aesthetic values.

During discussions for the Letter of Understanding, the landowners would identify the trees he wishes to have evaluated for aesthetic purposes.

Union would contract a qualified person to complete an evaluation of the trees.

The landowners would be paid the evaluated price for the trees in addition to other payments.

If trees are less than 5 inches in diameter replacement of the trees may be considered in lieu of a payment.

If the landowner disagrees with Unions evaluation a second evaluation may be completed using the same criteria as the original evaluation.

EVALUATION CRITERIA

A four part evaluation criteria will be completed for aesthetic trees:

Tree	=	Basic	x	Species	x	Condition	x	Location
Value		Value		Rating		Rating		Rating

Basic value is estimated without consideration of condition, species or location. It is calculated by multiplying the cross-sectional area of the tree trunk by an assigned value per square inch of trunk area. (in 1983 this value was \$22.00)

Species rating is a percentage rating based on the relative qualities of the tree species.

Condition rating is a percentage rating based on the health of the tree.

Location rating is a percentage rating based on the location of the tree.

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SCHEDULE 4

Schedule of Rates for Work
Performed by Owners of Land

Typically all work will be done by the Company. In the event that landowners perform work on behalf of the Company, at the Company's expense, the company will remunerate the landowner in accordance with the following;

1. Stonepicking - \$10.00 per hour/per person picking by hand
- \$45.00 per hour for use of tractor and wagon
2. Chisel Plowing - \$70.00 per hour
3. Cultivation - \$50.00 per hour
4. Tile Inspection - \$20.00 per hour *

* Payment for Tile Inspection is for those hours spent inspecting tile at the request of the contractor.

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SCHEDULE 5

Wet Soils Shutdown

The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.

Wet Soils Shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required.

While constructing the Company's pipeline the Company's senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors *or other Company representatives and other members of the Joint Committee with the assistance of the construction monitor*, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The inspectors/*other Company representatives and other members of the Joint Committee with the assistance of the construction monitor* shall consider the extent of surface ponding, extent and depth of rutting, surface extent and location of potential rutting and compaction (i.e, can traffic be re-routed within the easement lands around wet area(s)) and the type of equipment and nature of construction proposed for that day. The wet soil shutdown restriction would be in effect until, in the judgment of *the Company representatives and other members of the Joint Committee with the assistance of the construction monitor*, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse affects on the soils.

Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Union's inspection staff *and the Joint Committee with the assistance of the construction monitor are* responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year. **Where construction activities are undertaken by the Company in wet soil conditions (as determined by the monitor),** additional mitigation measures *may be* put in place to minimize resulting damages. Mitigation measures may, where appropriate, be developed by Union on a site specific basis and may include avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, or the use of other specialized equipment where deemed appropriate by Union. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.

Where construction activities are undertaken by the Company in wet soil conditions (as determined by the monitor),the Company shall pay to the landowner 150 % of disturbance and crop loss damage compensation on the area affected by the activities (area also to be determined by the construction monitor). The 150 % payment applies only once to any one area; on areas where the 150 % payment is applied, the landowner forfeits the right to top-up of crop loss damages under the L.O.U.. The 150 % payment does not affect the landowner's right to topsoil replacement where crop loss exceeds 50 % in the fifth year following construction.

ATTACHMENT 12



Agricultural and Environmental Consultants

FINAL REPORT

Construction Monitor Services NPS 48 Strathroy Lobo Pipeline Project Union Gas Limited

Prepared for: The Construction Monitor Committee of the
Union Gas Limited NPS 48 Strathroy Lobo
Pipeline Project

Submitted to: Construction Monitor Committee
Zora Crnojacki, Ontario Energy Board
Gerry Mallette, Union Gas Limited
Alan Wood, Landowner Representative

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Date: 18 Dec 08

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1 EXECUTIVE SUMMARY

Union Gas Limited constructed three natural gas pipelines prior to 1990 within a corridor in southwestern Ontario stretching from the Dawn Compressor Station, near Sarnia, to the Trafalgar Compressor Station on the western edge of Mississauga. The Union Gas Limited (Union Gas) NPS 48 Strathroy Lobo Pipeline Project, which is discussed in this report, represented one of the final construction components of a fourth pipeline within this corridor. The Strathroy Lobo section of the pipeline stretches 18 km from the Strathroy Gate near the town of Strathroy to the Lobo Compressor near the village of Lobo, Ontario. Construction occurred in 2007 and clean-up was completed in 2008.

A Construction Monitor Committee (CMC), consisting of one representative of the Ontario Energy Board (OEB), Union Gas and the landowners was formed. The CMC determined the need for Construction Monitor services for the duration of the Union Gas Limited NPS 48 Strathroy Lobo Pipeline Project. These services were provided by a Construction Monitor Team (CMT). The purpose of the Construction Monitor services was to observe and report on construction activities to provide a review of several operations of interest to landowners and the Ontario Energy Board. The objectives of the Construction Monitor services were:

1. To observe impacts of construction on the land, including right-of-way (ROW) preparation, trenching, backfill and clean-up operations as well as wet soil shutdown (WSS) events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union Gas;
3. To review all specific construction commitments included in Union Gas's construction contract;
4. To respond to specific requests by landowners or the Committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

The Construction Monitor services were provided by a team of three independent consultants with over 65 years of combined experience in various professional roles in agriculture, research, consulting and environmental monitoring. The CMT included: Dr. Jane Sadler Richards PAg, Cordner Science, Ailsa Craig, ON; Alan McCallum, CCA, McCallum Agronomic Services, Iona Station, ON; and Stephen Redmond, Redmond Agronomic Services, PAg, CCA, Lucan, ON.

The approach used by the CMT relied on the daily observations, notes and photographs made by the on-site Construction Monitor to assess and report on the 'impacts of construction on the land'. The pipeline construction work was observed from a practical perspective i.e., *What are the options for minimizing the impacts on the land given this is a construction site?* The approach did not include a review of every document related to the

construction project and development/completion of multiple checklists based on a comparison of 'what was printed in the documents and what was done during construction'. Also, the approach did not include a review of the financial details of individual landowner contracts or calculations of topsoil storage and expanded work areas, re-imburement for use of other property or any other financial matters between Union Gas and the landowner. The CMT was authorized to observe activities, review documents, respond to requests and report their findings. The CMT was not authorized to decide when wet soil shutdown was required or to initiate contact with landowners.

The CMT recognized Union Gas took positive steps to address the impacts of construction, remediate affected lands and improve landowner relations during the NPS 48 Strathroy Lobo Pipeline Project. The CMT recognized the difficulties experienced by those landowners who contacted the CMT when construction of the pipeline did not occur as they anticipated. The CMT concluded more work is required to balance the need to construct new pipeline with the need to mitigate the impacts of construction on the land through which the pipeline is built. However, the CMT observed good will amongst individuals on a daily basis, which suggested continued progress is possible. The recommendations in this report provide direction for positive change in the future. These recommendations may be particularly important when construction conditions are not as ideal as those experienced during the NPS 48 Strathroy Lobo Pipeline Project.

During the course of this project, the CMT was convinced by their combined experiences that a different approach to the organization of operations associated with pipeline construction is required to improve the balance between corporate pipeline and landowner interests. The primary recommendation of the CMT is that:

future pipeline construction projects should be divided into two distinct phases i.e., Construction Phase and Remediation (formerly called Clean-up) Phase, which have clearly defined and separate objectives and budgets.

The benefits of this approach are powerful:

1. The pipeline contractor could continue to focus on what they do best i.e., construct high quality pipelines.
2. The clean-up contractor could develop a focus that is remediation-centred, and has the capacity to address the needs of each property and landowner every day and every time they interact.
3. The overall cost of clean-up in time, effort, and damaged good will, could be reduced if more focus was placed on successful land remediation and minimizing the risk of failure of related structures and practices.

The primary recommendation and 38 additional recommendations are fully discussed in the report.

2 LIST OF RECOMMENDATIONS

Primary Recommendation, NPS 48 Strathroy Lobo Pipeline Project:

1. *The CMT recommends future pipeline construction projects should be divided into two distinct phases i.e., Construction Phase and Remediation (formerly called Clean-up) Phase, which have clearly defined and separate objectives and budgets.*

The following concepts should be integrated into the objectives and requirements of the Remediation Phase:

- A clearly defined set of objectives and budget that focus on maximizing the effectiveness and efficiency of land remediation efforts. (This would be similar to the current Construction Phase engineering requirement to “perfect” the installation of the pipeline.)
- The Remediation Phase would begin with pre-construction landowner meetings, land clearing, and drainage tile interruption, and continue as soon as backfilling of the trench begins.
- The contractor would appoint a Remediation Foreman, approved by the landowners or their representative(s), to oversee all remediation activities. The responsibilities and budgets of the Construction Foreman and the Remediation Foreman should complement each other and not overlap. This should allow each foreman to focus on achieving the best possible outcome for their phase of the work and improve the balance between meeting the interests of the pipeline company and the interests of the landowners.
- The independent Soils Inspector for construction should continue to act as the soils specialist for replacement of topsoil as this physical step in the Remediation Phase is linked to the procedures initiated during topsoil stripping in the Construction Phase.
- An experienced independent agronomist holding a current Certified Crop Advisor (CCA) designation should be contracted to oversee all agronomic aspects of remediation. The Remediation Foreman and the CCA may or may not be the same person.
- The CCA must be current with all Best Management Practices (BMPs) used in crop production including use of new equipment, conservation tillage systems, fertility practices, etc. The CCA would consult with each landowner and determine, prior to land remediation (i.e., clean-up), what equipment, materials and techniques are required to rehabilitate the unique features of each property.

- The CCA should discuss with each landowner the option to overwinter the topsoil pile and replace the topsoil on the field in the year following construction. If construction is delayed by wet weather, a decision could be made with the landowner to minimize the use of large dozers and hi-hoe equipment and/or move the work and resources into the following year.
- The CCA would also consult with each landowner on other issues such as tile drainage prior to topsoil replacement, acceptance of lower quality topsoil for subsidence areas and the stone picking requirement for each property.
- A distinct Remediation Phase, with a separate budget, would provide the Foreman/CCA with the flexibility to source tillage and seeding equipment for specialized clean-up procedures from the landowners themselves or other local suppliers. This would minimize the use of construction contractor preferred equipment and perhaps decrease the cost of clean-up by allowing landowners to perform more secondary tillage operations.
- The roles of the Lands Agent, Soils Inspector, CCA, and Construction Monitor should be revised to ensure they are complementary within the organizational structure of the project.

Additional Recommendations (listed in discussion order):

2. *A checklist for each property to standardize the process of documenting observations for each property and to list key steps in pipeline construction and clean-up could be developed. The checklist should be completed by the on-site Monitor. It also should provide additional documented assurance that each property was observed regularly, consistently and during key activities.*
3. *The CMC should appoint a communications coordinator to ensure all requests from the CMT to the CMC are responded to not only on a day-to-day basis but also when the CMC needs to meet to prepare a joint response. The role of communications coordinator could rotate on a one or two month basis amongst CMC members.*
4. *If the CMT role is not modified to allow them to communicate directly with landowners along the pipeline, then a clear mandate must be given to the CMC Landowner Representative or their delegate to communicate issues regarding individual lands to each affected landowner within a specified time frame.*
5. *The Communications Protocol should be updated and used by the CMT during future pipeline projects.*
6. *Two-way discussions between the on-site Monitor and pipeline staff should continue to provide the CMT with the best opportunity to understand construction and clean-up activities in progress.*

7. *The Contact Reporting system should be maintained for future projects and the CMT should have the discretion to forward copies of a Contact Report to all third parties mentioned or involved in the discussion, issue or site meeting – including the affected landowner(s). The Contact Report could be enhanced to include landowner contacts initiated by the CMT to advise them of potential items they may want to follow-up on with regard to impacts of the construction and clean-up activities on their land. This would allow the CMT to identify potential action items, shift the responsibility for follow-up to the parties involved and eliminate the need for the CMC Landowner Representative to contact affected landowners.*
8. *Surveys involving all parties in the pipeline project could be used to measure changes in levels of communication, knowledge and satisfaction regarding respective roles, responsibilities and procedures during the project.*
9. *The same Lands Agent should represent Union Gas during both the pre-construction meetings with landowners and the on-site construction and remediation work. This should enhance relationships and communications between parties.*
10. *The on-site Lands Agent should have a computer and email access to improve general communications and to assist the CMT with effective communication between Union Gas and landowners.*
11. *Documents involving landowner interests should be reviewed to eliminate inconsistencies and streamlined for ease of transfer of information from negotiated terms to a working list of commitments that can be updated as work progresses.*
12. *A procedure for timely update and distribution of the Line List (or applicable sections) to those involved including the affected landowner(s) would improve communications.*
13. *It is essential to maintain flexibility in the field to make alternative or additional verbal commitments between Union Gas and the landowner to accommodate changing field conditions or unforeseen circumstances. Changes in commitments, however, must be documented and circulated to affected parties within 24 hrs of discussion.*
14. *The clean-up procedure document should clearly identify what practices will occur on each type of land (i.e., field crop, forage crop, pasture, natural lands, woodlots) and on each section of the ROW (i.e., working area, trench area, storage area).*
15. *Exceptions to the standard procedure should be identified in each document.*
16. *An education program aimed at ensuring landowners have enough information to make informed decisions on construction and remediation options for their land must be provided.*
For example, the education program could include a factsheet explaining the procedures used in pipeline construction. This factsheet would outline the steps the Contractor will take to prepare the area for construction, the steps required for the installation of the pipeline and the clean-up procedures involved. The

factsheet could be used in the pre-construction meeting to review the construction activities in relation to an individual landowner's property. This would allow each landowner to visualize the construction on their property and help them indicate any special needs related to their properties. Another factsheet could be developed to provide Union Gas and landowners with relevant information on Best Management Practices (BMPs) related to land management options during and after pipeline construction.

17. *Landowners could be provided with the option to hire a consulting agrologist e.g., CCA, to attend an education program on their behalf so the consultant can make recommendations to the landowner on what construction and remediation options are best suited for their land.*
18. *A minimum of two one-on-one landowner meetings should be held during the pre-construction period. For example, the first meeting could be used to view educational materials, including visuals such as a video of construction and remediation (i.e., clean-up) practices, and to initiate discussions on how the project could affect the landowner's property and operations. A second meeting could be used to review construction and remediation practices again, to answer questions/concerns arising from the first meeting, and to discuss/confirm specific requirements for construction and remediation on each property.*
19. *At each pre-construction meeting, the topics, arrangements and action items arising from the meeting must be documented in writing and everyone attending the meeting must initial and receive a copy of the record of the meeting before they leave.*
20. *The timing and methods used to negotiate financial compensation should be examined to ensure financial concerns do not distract the parties from construction and remediation concerns.*
21. *The on-site Monitor should attend the weekly Union Gas/landowner meetings on a regular basis. This would improve the CMT's understanding of issues and their communication with the parties.*
22. *A list of action items and responsibilities for follow-up could be prepared and updated at each weekly meeting to track the status and resolution of concerns. Action notes could be circulated by email to those involved including off-duty members of the CMT.*
23. *Unique landowner needs and sensitive lands should be identified as soon as possible in the project to ensure adequate and timely follow-up.*
24. *Plans for rehabilitating each property should include consideration of BMPs.*
25. *Significant improvement in the effectiveness and efficiency of the equipment wash procedures could be achieved with the establishment of an industrial-sized, dedicated wash station.*
26. *Landowners should be provided with agronomic information and/or consultation before making a decision to allow a partial strip rather than a full strip of topsoil on their lands during construction.*

27. *A factsheet could be developed to provide appropriate agronomic information on each choice.*
28. *The specifications and procedures for stone picking should be revised to allow flexibility to adjust the requirements relative to natural soil conditions.*
29. *Timely seeding on a property-by-property basis should be required rather than seeding all or a group of properties after construction is completed.*
30. *Consistency of depth of topsoil across each property should be confirmed.*
31. *Notification procedures should be reviewed to require Union Gas and landowners to contact each other within a specified timeframe when one party has new information about depth of soil cover over a pipeline. This information could provide assurances to both Union Gas and landowners that adequate soil cover remains in place or, more importantly, alert both Union Gas and landowners that adequate cover is not in place and that steps must be taken by the landowner to minimize risks until adequate soil cover can be re-established by Union Gas.*
32. *Landowners should be provided with agronomic information and/or consultation before making a decision to allow tile drainage installation soon after subsoil/topsoil rehabilitation.*
33. *A factsheet could be developed to provide appropriate agronomic information on available choices.*
34. *Consideration should be given to recognizing and accommodating differences in contractor/landowner priorities in any timelines included in contract and/or landowner agreements.*
35. *The contractor should keep equipment and work crews at full strength to the end of the project so that clean-up proceeds as quickly as possible.*
36. *An analysis of the timelines required for both construction and clean-up activities may help in the allocation of time and resources between the two phases on a pipeline project i.e., construction and remediation.*
37. *Consideration should be given to establishing a method for scientifically documenting specific soil conditions on those days when it is difficult to visually assess the need for a wet soil shutdown.*
38. *A review of the objectives, and the scientific and statistical methods available to assess the agronomic effectiveness of remediation procedures should be conducted.*
39. *Maximum use of innovations in electronic technology should improve the efficiency of daily report preparation in the future.*

3 INTRODUCTION

3.1 BACKGROUND AND SCOPE OF WORK

Union Gas Limited constructed three natural gas pipelines prior to 1990 within a corridor in southwestern Ontario stretching from the Dawn Compressor Station, near Sarnia, to the Trafalgar Compressor Station on the western edge of Mississauga. The Union Gas Limited (Union Gas) NPS 48 Strathroy Lobo Pipeline Project, which is discussed in this report, represented one of the final construction components of a fourth pipeline within this corridor. The Strathroy Lobo section of the pipeline stretched 18 km from the Strathroy Gate near the town of Strathroy to the Lobo Compressor near the village of Lobo, Ontario. Construction occurred in 2007 and clean-up was completed in 2008.

Landowner experiences with previous Union Gas construction projects regarding construction procedures; activity under wet soil conditions; and communications between Union Gas, the pipeline contractor and landowners involved in the projects, gave rise to significant discussions between Union Gas and the landowners along the Strathroy Lobo section of the pipeline. A Construction Monitor Committee (CMC), consisting of one representative of the Ontario Energy Board (OEB), Union Gas and the landowners was formed. The CMC determined the need for Construction Monitor services for the duration of the Union Gas Limited 48" Strathroy Lobo Pipeline Project. These services were provided by a Construction Monitor Team (CMT). The approach and methods used by the Construction Monitor Team (CMT) were based on the description of the Construction Monitor role provided by the CMC during the consultant selection process (Appendix A).

This content of this report follows direction similarly provided by the CMC (Appendix A):

A final report generally summarizing all reports shall be provided at the end of the contract term. The report shall contain at a minimum, recommendations in respect to the following:

- Communications with landowners and the Committee.
- Potential construction activity improvements.
- Reporting requirements.

3.2 PURPOSE

The purpose of the Construction Monitor services was to observe and report on construction activities to provide a review of several operations of interest to landowners and the Ontario Energy Board.

3.3 OBJECTIVES

1. To observe impacts of construction on the land, including right-of-way (ROW) preparation, trenching, backfill and clean-up operations as well as wet soil shutdown (WSS) events;
2. To review construction activities for compliance with the Ontario Energy Board (OEB) Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union Gas;

3. To review all specific construction commitments included in Union's construction contract;
4. To respond to specific requests by landowners or the Committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

4 METHODS

4.1 CONSTRUCTION MONITOR SERVICES

4.1.1 Construction Monitor Team (CMT)

The Construction Monitor services were provided by a team of three independent consultants with over 65 years of combined experience in various professional roles in agriculture, research, consulting and environmental monitoring. The CMT was coordinated by Dr. Jane Sadler Richards PAg, Cordner Science, agricultural and environmental consultants, Ailsa Craig, ON. Dr. Sadler Richards also was an active on-site Monitor. The other members of the CMT were Alan McCallum, CCA, McCallum Agronomic Services, Iona Station, ON and Stephen Redmond, Redmond Agronomic Services, PAg, CCA, Lucan, ON.

The CMT received project and safety training from Union Gas prior to the commencement of construction activities. Union Gas provided several documents to the CMT members for their review and ongoing reference ([Appendix B](#)).

4.2 COMMUNICATIONS PROTOCOL

The CMT developed procedures to ensure the three-person rotation worked effectively and efficiently ([Appendix C](#)). The overall goal was to develop clear, concise and transparent communications between the CMT members, and between the CMT and the CMC.

In summary the responsibilities of the CMT members were to:

- maintain open and regular verbal and written communications within the CMT and the CMC;
- complete, distribute and file communications documentation in a timely, organized and secure manner; and
- conduct regular 'check backs' on communication documents to ensure that action items were followed up and issues were addressed.

CMT members communicated as follows:

- each member maintained a field notebook that included communication and personal notes with observations of construction activities; and information related to photographs and/or videos taken on-site;
- when necessary, the on-site Monitor phoned other CMT members and provided a brief summary or comment on the day's activities and future items to consider;

- all report documents were created and transmitted by email generally at the end of each day, to enable other CMT members and the CMC to understand construction progress and issues as they developed; and
- an original, signed copy of each report was filed in the Cordner Science office at Ailsa Craig, ON.

4.3 ON-SITE MONITORING

4.3.1 Approach

The approach used by the CMT relied on the daily observations, notes and photographs made by the on-site Monitor to assess and report on the 'impacts of construction on the land'.

The pipeline construction work was observed from a practical perspective i.e., *What are the options for minimizing the impacts on the land given this is a construction site?*

The approach did not include a review of every document related to the construction project and development/completion of multiple checklists based on a comparison of 'what was printed in the documents and what was done during construction'. Also, the approach did not include a review of the financial details of individual landowner contracts or calculations of topsoil storage and expanded work areas, re-imburement for use of other property or any other financial matters between Union Gas and the landowner.

4.3.2 Methods

The on-site Monitor arrived at the Union Gas field office in the morning between 6:30 and 7:30 am. They received a copy of the Daily Working Schedule, which listed the operations and where they would occur along the pipeline. Casual discussions with other inspectors often occurred at this time.

The on-site Monitor then traveled to various locations along the pipeline during the day to observe the work as it progressed. The on-site Monitor may have referred to documents provided by Union Gas during training sessions or during ongoing work ([Appendix B](#)) to provide specifics related to each property e.g., property number and owner, request for whole or partial stripping of easement. However, the on-site Monitor relied mainly on the Line List provided by Union Gas, which summarized the specific land-related agreements made with each landowner (not including financial agreements) in the Letter of Understanding (LOU) and the results of the landowner interviews conducted several months prior to the work and recorded on the Union Gas [landowner] Interview Sheet. The on-site Monitor regularly noted items to continue to check on as the work progressed. This information was passed on to the other Monitors on the team by email or telephone if they were scheduled to be there when the follow-up was required.

Wet conditions on the right-of-way (ROW) resulted in a full or partial wet soil shutdown (WSS). The CMT was not involved in WSS decisions. The on-site Monitor reviewed the revised Daily Working Schedule and decided how best to spend their time for the day. Ongoing operations were often monitored more closely for impacts during wet soil conditions, paper work was caught up, or discussions with landowners/other monitors/pipeline workers may have occurred. Occasionally, the on-site Monitor returned to their home office to do paper work or other unrelated work and returned later in the day to assure themselves that activity on the pipeline occurred as planned during the WSS and to look for impacts related to wet soil conditions.

The on-site Monitor had unrestricted access (within safety limitations) to the pipeline construction site when observing land-related operations. The on-site Monitor regularly commented on or discussed activities with key workers e.g., Lands Agent, Soils Inspector, as appropriate, to ensure they (i.e., the on-site Monitor) thoroughly understood the activities in progress and/or the thinking behind decisions to conduct work in a certain way. This type of communication often provided an opportunity for those present to review the actual activities and the pros and cons of the options that were available for conducting or communicating about the work. The objectives of the on-site Monitor were to fully understand the construction options, to assure themselves that the option chosen for completing the work was reasonable under the construction circumstances and to assure themselves that impacts on the land were minimized as much as practical. The outcome was a record of observed work, conditions related to real or potential impacts on the land and, on occasion, an opinion related to a situation e.g., "soils were wet/were dry in the expanded work area where the tie-in was completed". This information was documented in a series of reports i.e., Daily Report, Contacts Report, Wet Soil Shutdown Report and Weekly Report.

The on-site Monitor was invited on a few occasions (i.e., less than 20) by Union Gas, the CMC Landowner Representative, or individual landowners to attend Tue morning Landowner Liaison Meetings, on-site discussions between the Lands Agent and a landowner, and to speak to a tour group from the Ontario Energy Board. These contacts and related follow-up were documented in the Contacts Reports along with other significant discussions with key workers regarding pipeline activities.

4.3.3 Record Of On-Site Observations

Each member of the CMT kept personal notes regarding observations, conversations and photographs/videos of on-site conditions. These notes were used to prepare subsequent project reports. The notebooks and photographs/videos were filed by date and key word at Corder Science and remain part of the project record.

4.4 ON-SITE DATA COLLECTION

The CMT mandate was to observe activities and impacts on the land; not to collect data. Data representing daily rainfall along the pipeline and soil compaction on the ROW were collected by the Soils Inspector (Stantec Consulting) on behalf of Union Gas. Manual rainfall gauges were placed at the following locations: Field Office (Strathroy); Saxton Rd (SF #2); Abredeem Rd. (SF #6); Komoka Rd (SF #8); and Nairn Rd (SF #11). After soil tillage procedures were completed, a hand-held soil penetrometer was used by the Soils Inspector to obtain data on resistance to soil penetration, which is an indicator of soil density and structure. This information may be used to assess soil compaction.

4.5 REPORTS

All reports were transmitted electronically by email, generally at the end of each day, to the CMT and the CMC representatives from Union Gas and the landowners. The CMC representative from the Ontario Energy Board (OEB) received the Weekly Report, which summarized daily activities. Paper copies of each report were signed and filed at Cordner Science.

4.5.1 Daily Report

Each day the on-site Monitor created a daily report using a template (Appendix D) that listed the construction activities and progress occurring on various properties. The daily report also included a brief summary of weather, soil conditions and major events that occurred throughout the day.

4.5.2 Weekly Report

The on-site Monitor on Saturday i.e., at the end of each week, prepared a Weekly Report using a template (Appendix D) that summarized the construction activity for the week, as well as the weather and contacts made during the week.

4.5.3 Wet Soil Shutdown Report

If rainfall created wet soil conditions such that a wet soil shutdown (WSS) event occurred, then the on-site Monitor prepared a WSS report using a template (Appendix D) that documented the time of the WSS, the persons involved in the WSS decision, the construction activities suspended and the construction activities that were allowed to proceed.

4.5.4 Contact Report

Verbal discussions between the CMT and others on the construction-site regarding relevant activities, whether by phone or in person, were documented by the on-site Monitor. These discussions were formally documented in a daily Contacts Report using a template (Appendix D) that detailed the date and time of the discussion, the persons in attendance, whether the discussion was by phone or a physical meeting, subject and points of discussion, decisions made and action items required.

4.5.5 Final Report

The CMT was directed to complete a final report as follows (Appendix A):

A final report generally summarizing all reports shall be provided at the end of the contract term. The report shall contain at a minimum, recommendations in respect to the following:

- *Communications with landowners and the Committee;*
- *Potential construction activity improvements; and*
- *Reporting requirements.*

5 RESULTS

5.1 CONSTRUCTION MONITOR SERVICES

The Construction Monitor services were delivered as agreed with the CMC. No concerns or complaints about the approach or conduct of the CMT members were brought to the attention of the CMT. Union Gas regularly invited the on-site Monitor to be present during landowner discussions. Individual landowners involved in discussions with Union Gas regularly expressed their thanks to the on-site Monitor for their presence during the discussions.

5.2 COMMUNICATIONS

No concerns or complaints about the communications between the CMT members or between the CMT and CMC were brought to the attention of the CMT.

5.3 ON-SITE OBSERVATIONS

Each CMT member maintained a raw data file including personal notebooks and photographs or videos. Approximately 1000 photographs/videos showing various aspects of the construction work were taken by the CMT in 2007 and 2008.

5.4 ON-SITE DATA

5.4.1 Precipitation

5.4.1.1 Monthly Rainfall

Table 5.1 illustrates the total rainfall that occurred during the July 6 to November 16, 2007 construction period compared to the normal rainfall for Strathroy, ON.

Table 5.1: Monthly Rainfall (July - November, 2007) Along The NPS 48 Strathroy Lobo Pipeline ROW Compared To Normal Rainfall From Strathroy – Mullifarry Weather Station, Environment Canada

Month	2007 Rainfall (mm)	Normal Rainfall (mm)	% of Normal
Jul	30.2	71.7	42
Aug	99.0	82.1	121
Sep	32.8	89.8	37
Oct	58.2	67.4	86

Month	2007 Rainfall (mm)	Normal Rainfall (mm)	% of Normal
Nov	60.8*	77.6	78

* Note: 23.4 mm of rainfall were recorded during the first 16 days of November when clean-up activities were in progress on the ROW.

Construction on the Union Gas NPS 48 Strathroy Lobo Pipeline Project benefited from below average rainfall during July, September, October and November, 2007. Rainfall was above average in August, 2007. Precipitation data were not available for the periods from February 28 to March 8, 2007 and from April 14 to May 7, 2007.

5.4.1.2 Rainfall Events

The individual rainfall events shown in Table 5.2 represent the approximate amounts of rainfall recorded at the five rain gauges established along the 18 km pipeline ROW. Amounts varied from the Strathroy Compressor station to the Nairn Road near the Lobo Compressor Station and provided an indication of the pattern of rainfall encountered by the contractor during the construction period from July 6 to November 16, 2007. In general, one or two significant rainfall events occurred along the ROW each month.

Table 5.2: Rainfall Events (July - November, 2007) Along The NPS 48 Strathroy Lobo Pipeline ROW

Date	Rainfall (mm)	Date	Rainfall (mm)	Date	Rainfall (mm)	Date	Rainfall (mm)	Date	Rainfall (mm)
Jul 9	< 0.2	Aug 2	2 - 5	Sep 10	14 - 18	Oct 2	5 - 6	Nov 1	< 0.2
Jul 12	< 0.2	Aug 7	20 - 24	Sep 11	8 - 9	Oct 6	1	Nov 6	4 - 5
Jul 14	2 - 3	Aug 9	6 - 11	Sep 12	3 - 6	Oct 9	< 0.2	Nov 7	10 - 18
Jul 17	1 - 2	Aug 19	6	Sep 14	3 - 4	Oct 10	< 0.2	Nov 14	< 0.2
Jul 18	6 - 26	Aug 20	9 - 12	Sep 15	1 - 2	Oct 11	< 0.2		
Jul 19	1 - 2	Aug 23	15 - 20	Sep 22	< 0.2	Oct 12	< 0.2		
		Aug 24	1 - 2	Sep 26	2 - 4	Oct 18	0.5 - 3		
		Aug 25	10 - 14	Sep 28	4 - 14	Oct 19	< 0.2		
						Oct 27	10 - 12		

5.4.1.3 Wet Soil Shutdown Events

The various rainfall events (Table 5.2) required a decision by Union Gas to continue construction activities if the impact on the landowner's soil was negligible or to implement a full or partial wet soil shutdown to prevent construction vehicles from tracking through soils causing rutting or soil compaction.

Table 5.3 lists the dates of the full or partial WSS events and indicates the time a decision was made to limit construction activities. A 6:30 am WSS usually indicated a rainfall event that occurred overnight or late the previous day. A WSS event that

occurred later in the morning or during the work day normally reflected weather and soil conditions that continued to deteriorate, thus requiring a WSS.

Table 5.3: Wet Soil Shutdown Events (July 2007 - November 2008) Along The NPS 48 Strathroy Lobo Pipeline ROW

Date	Shutdown P- Partial F-Full	Time of Shutdown	Date	Shutdown P- Partial F-Full	Time of Shutdown
Jul 19/07	P	6:30 am	Oct 23/07	P	6:30 am
Aug 7/07	P	10:00 am	Oct 24/07	P	6:30 am
Aug 8/07	P	7:00 am	Oct 27/07	P	6:30 am
Aug 9/07	P	8:30 am	Nov 1/07	P	6:30 am
Aug 20/07	F	6:30 am	Nov 7/07	F	6:30 am
Aug 21/07	P	6:30 am	May 8/08	P	7:00 am
Aug 23/07	P	8:00 am	May 12/08	F	7:00 am
Aug 24/07	P	8:00 am	May 14/08	P	12:00 pm
Aug 25/07	P	6:30 am	May 15/08	F	7:00 am
Aug 27/07	P	6:30 am	May 16/08	P	7:00 am
Sep 10/07	P	6:30 am	May 17/08	P	8:00 am
Sep 11/07	P	6:30 am	May 22/08	F	7:00 am
Sep 12/07	P	6:30 am	May 31/08	F	7:00 am
Sep 15/07	P	7:30 am	Jun 2/08	P	7:00 am
Sep 26/07	P	10:30 am	Jun 3/08	F	7:00 am
Sep 28/07	P	7:00 am	Sep 30/08	F	5:30 pm
Oct 2/07	P	6:30 am	Oct 1/08	P	7:00 am

A total of 26 partial WSS events and 8 full WSS events occurred during the construction period. This represented less than 20% of available construction days where wet soils limited construction activities.

5.4.2 Post Construction Soil Compaction

Penetrometer data for only six properties were provided to the CMT despite repeated assurances all data would be available for review. The CMT anticipated the information could be used to confirm the minimum depth of tillage i.e., to the depth of the soil probe, and that soil within the ROW on a property was disturbed during clean-up to alleviate soil compaction due to construction activities. The CMT was unable to complete this assessment.

5.5 REPORTS

5.5.1 Log Of Daily Reports

A total of 173 Daily Reports were created for the construction and clean-up activities on the Union Gas Limited NPS 48 Strathroy Lobo Pipeline Project. One group of reports was written for the tree cutting and brush burning activities that occurred from February 28 to March 8, 2007. A second group of reports was written for the

pipeline construction activities that occurred from July 6 to November 16, 2007. A third group of reports was written for the final clean-up activities from May 5 to October 7, 2008. A log of Daily Reports is found in [Appendix E](#).

5.5.2 Log Of Weekly Reports

A total of 29 Weekly Reports were written for the construction and clean-up activities from February 28, 2007 to October 7, 2008. The Weekly Reports included information compiled from the Daily, Contact and Wet Soil Shutdown Reports. Almost all of the information appearing in these latter reports was included in the Weekly Reports because the CMC member representing the Ontario Energy Board (OEB) received only the Weekly Reports and the CMT wanted to ensure the OEB member was fully aware of activity associated with the project. A log of Weekly Reports is not provided in this Final Report as the information is redundant. The reports are on file with Cordner Science.

5.5.3 Log Of Wet Soil Shutdown Reports

Rainfall events resulted in a total of 33 wet soil shutdown (WSS) decisions during pipeline construction activities from July 6, 2007 to October 7, 2008. A log of WSS Reports is found in [Appendix F](#).

5.5.4 Log Of Contact Reports

Communication with various personnel and stakeholders on the project resulted in a total of 87 Contact Reports. A log of Contact Reports is found in [Appendix G](#).

5.5.5 Final Report

A draft final report was submitted to the CMC on February 29, 2008. The final report i.e., this document, was completed in December, 2008 at the end of the contract term for Construction Monitor services.

6 DISCUSSION AND RECOMMENDATIONS

6.1 ORGANIZATION OF OPERATIONS INTO A CONSTRUCTION PHASE AND A REMEDIATION PHASE

During the course of this project, the CMT was convinced by their combined experiences that a different approach to the organization of operations associated with pipeline construction is required to improve the balance between corporate pipeline and landowner interests. The following discussion and recommendations summarize the experiences and thinking of the CMT in this regard.

Discussion:

Three lines of thinking lead to the idea that a new approach to the organization of construction operations is required.

First, it was clear to the CMT during the project that the standard procedures for construction and clean-up used by Union Gas were adequate in 2007 for many of

the 46 properties (not including properties owned by Union Gas) within the ROW, especially since the sandy soil types along the ROW and the weather during the 2007 construction season were very conducive to construction activities. Under these near ideal construction conditions, it was also clear to the CMT that at least seven (15%) landowners were not satisfied with the standard procedures used by Union Gas and were willing to advocate for themselves. These landowners told members of the CMT they felt they were either misled during the pre-construction interview process, or their concerns were not addressed to their satisfaction, or promises made were not fulfilled during the construction and clean-up phases of the work.

After observing the NPS 48 Strathroy Lobo Pipeline Project, the CMT concluded there were two divergent views of pipeline work.

1. It appeared to the CMT that, notwithstanding the very positive approach exercised by Union Gas personnel in trying to resolve landowner issues, the corporate view or perspective was focused on high quality pipeline construction. Also, it appeared to the CMT that Union Gas and its contractor installed the 48" pipeline with considerable expertise and precision. The early success of the pipe-testing procedure was proof of the quality of work and professionalism involved in all aspects of the pipeline construction.
2. It appeared to the CMT the landowner's view or perspective was focused on minimizing the impacts of construction, receiving adequate compensation for the impacts of construction, long-term land rehabilitation and returning to normal farm operation as soon as possible. These sentiments were expressed to the CMT by landowners and/or the Lands Agent at various times during the project.
3. It was apparent to the CMT that these two divergent views played a role in how issues were addressed by both parties.

Second, the following table was provided to the CMT by Union Gas to describe operations during the project:

OPERATIONS					
Clearing	<input type="text"/>	Pipework	<input type="text"/>	Water Crossing	<input type="text"/>
Stripping	<input type="text"/>	Trenching	<input type="text"/>	Drain Tile Repair	<input type="text"/>
Grading	<input type="text"/>	Backfilling	<input type="text"/>	Access/Culv/Bridge	<input type="text"/>
Fencing	<input type="text"/>	Boring	<input type="text"/>	Erosion Control	<input type="text"/>
Stringing	<input type="text"/>	Road Xing	<input type="text"/>	Clean-up	<input type="text"/>
Bending	<input type="text"/>	Rail Xing	<input type="text"/>	Other	<input type="text"/>

Often the terms construction or clean-up were used by workers to describe the general nature of the work in progress on a day-to-day basis. Construction involved activities including: clearing, stripping, grading, stringing, bending, pipework, trenching, backfilling, boring, crossings (road, rail, water), access (roads, culverts, bridges) and erosion control (filter fences, etc.). Clean-up activities started after

backfilling and involved grading, fencing, drain tile repair and clean-up (rock picking, take-down of erosion control structures, subsoiling, cultivation, seeding, etc.). The CMT observed that construction activities were very focused on achieving the main objective of constructing a working pipeline to meet quality specifications within budget and by a specified date. Clean-up activities were less focused and regularly adjusted to fit in amongst the priorities of construction activities. As a result, equipment, size of work crew, timing and/or budget were not always best suited to meeting land remediation objectives. Also, while the construction documents provided to the CMT were considered 'final' and contained sections related to clean-up procedures, a clean-up document entitled Clean-up Procedure Package was less well prepared and was provided mid-way through the project. The first section was labeled 'draft' and the remaining sections were a compilation of sections from the construction documents previously received by the CMT. The CMT did not receive a finalized Clean-up Procedure Package during the project.

The following provide examples of poor decision-making and workmanship relative to meeting land remediation objectives during clean-up:

Example 1: A landowner believed they had requested a survey of their property (#027) prior to construction to ensure the original character and shape of the steep slopes on the property could be re-established after construction. The pre-construction survey was not done due to an apparent miscommunication during the pre-construction meeting and very little effort was made by the contractor to document the 'before' conditions so they could be re-established 'after' construction. Several attempts at re-shaping the property were made before the landowner was satisfied with the work. In the meantime, the landowner felt isolated and 'in the wrong' for insisting that the contractor continue re-shaping the land until the slopes met their expectations. The contractor did not appear to be sensitive to the landowner's perspective i.e., the landowner did not want their land 'improved' by the construction of gentler slopes; they wanted their land returned to the way it was before construction. The negotiating challenges faced by the Lands Agent and the extra expense incurred by the contractor could have been avoided with more focus on this landowner's perspective, needs and the overall objective of satisfactory land rehabilitation.

Example 2: Approximately 90 to 100 loads of topsoil were trucked onto property #038 in spring 2008 to address soil subsidence after construction over the 48" pipeline. This topsoil contained foreign material (a battery cable, pieces of plastic and concrete were observed by the CMT) and large lumps of subsoil-like clay. The landowners for properties #037 and #038 strongly resisted Union Gas's position that the material was acceptable for spreading on agricultural land. However, as listed in the LOU, the landowners should have had the opportunity to 'approve' the source of this topsoil before it was purchased and trucked on-site.

Union Gas and the contractor did not appear to be sensitive to the landowners' perspective i.e., the landowners wanted quality topsoil on their properties to minimize the long term impacts of construction on crop yields and field management practices. During on-site meetings, the CMT heard these landowners say they were concerned that poor or different topsoil conditions along the ROW would either negatively affect crop yields in years to come if the ROW was managed the same as the rest of the field, or they would have to use a different land management strategy just for the ROW in order to ensure a good crop yield on the ROW. In either case, the landowners were concerned they would lose time and/or money due to the presence of the pipeline. Union Gas's position that landowners would be compensated for any future need for additional fertilizer, extra time and/or yield loss put the onus on the landowners to pursue this option. These landowners wanted the problem dealt with up front in the best way possible to minimize the risk of having to deal with it at a later date. The negotiating challenges faced by Union Gas and the extra expense incurred by the contractor could have been avoided with more focus on the landowners' perspective, needs and the overall objective of satisfactory land rehabilitation.

Example 3: The push to complete the clean-up procedures in the fall of 2007 resulted in a decision to seed the steep slope on property #034 in November 2007. This was done in an effort to establish some vegetative growth to help stabilize the soil even though it was very late in the season to do so. (The work should have been done at least a month earlier.) The ATV broadcast seeder used to seed this slope traveled up and down the slope creating compacted areas under the tire tracks that subsequently eroded over the winter. In fall 2008, general labourers spent many hours adding topsoil to the eroded channels on this slope and then re-seeding it in an attempt to re-establish the grass. The extra expense incurred by the contractor could have been avoided with more focus on the overall objective of satisfactory land rehabilitation.

Example 4: A Brillion grass seeder was brought onto one property (#013) to re-seed a large area in 2008 where the fall 2007 attempt to establish a grass mixture had failed. This specialized piece of equipment should have been available for the entire clean-up procedure in 2007 and 2008 as many areas required grass seeding. It appeared to the CMT that while satisfactory equipment was used during the construction phase of the project it was not always used during the clean-up phase of the work. The extra expense incurred by the contractor to re-seed property #013 could have been avoided if there was more focus on the overall objective of satisfactory land rehabilitation.

Example 5: A grass waterway was constructed across the full easement on property #037. This waterway was shaped with a dozer during the final stages of clean-up in

fall 2008. Workmanship during the final key step in construction of this critical erosion control structure was considered sub-standard by the CMT. Fertilizer was incorporated across the grass waterway structure with a field cultivator and the grass was seeded with an ATV spreader without any attempt to roll or firm the cultivated topsoil before or after seeding. The lack of good seed-to-soil contact will probably result in very poor or no establishment of a vegetative cover. Without cover the waterway will be prone to soil erosion due to water moving across the unprotected constructed channel.

It is anticipated by the CMT that the onus will be on the landowner to follow-up with Union Gas in the future to ask for additional remediation work on this important erosion control structure. The potential extra time, effort and expense incurred by Union Gas and the contractor when rebuilding a failed structure, and the potential extra time, effort and expense incurred by the landowner when identifying the problem, contacting Union Gas and ensuring the problem is fixed appropriately could be avoided with more focus on the overall objective of satisfactory land rehabilitation.

Third, the CMT believes the circumstances outlined in the above two lines of thinking could be substantially addressed if there is a clear separation in the management of operations associated with construction and clean-up objectives.

The benefits of this approach are powerful:

1. The pipeline contractor could continue to focus on what they do best i.e., construct high quality pipelines.
2. The clean-up contractor could develop a focus that is remediation-centred, and has the capacity to address the needs of each property and landowner every day and every time they interact.
3. The overall cost of clean-up in time, effort, and damaged good will could be reduced if more focus was placed on successful land remediation and minimizing the risk of failure of related structures and practices.

Primary Recommendation, NPS 48 Strathroy Lobo Pipeline Project:

1. *The CMT recommends future pipeline construction projects should be divided into two distinct phases i.e., Construction Phase and Remediation (formerly called Clean-up) Phase, which have clearly defined and separate objectives and budgets.*

The following concepts should be integrated into the objectives and requirements of the Remediation Phase:

- A clearly defined set of objectives and budget that focus on maximizing the effectiveness and efficiency of land remediation efforts. (This would be similar to the current Construction Phase engineering requirement to “perfect” the installation of the pipeline.)
- The Remediation Phase would begin with pre-construction landowner meetings, land clearing, and drainage tile interruption, and continue as soon as backfilling of the trench begins.
- The contractor would appoint a Remediation Foreman, approved by the landowners or their representative(s), to oversee all remediation activities. The responsibilities and budgets of the Construction Foreman and the Remediation Foreman should complement each other and not overlap. This should allow each foreman to focus on achieving the best possible outcome for their phase of the work and improve the balance between meeting the interests of the pipeline company and the interests of the landowners.
- The independent Soils Inspector for construction should continue to act as the soils specialist for replacement of topsoil as this physical step in the Remediation Phase is linked to the procedures initiated during topsoil stripping in the Construction Phase.
- An experienced independent agronomist holding a current Certified Crop Advisor (CCA) designation should be contracted to oversee all agronomic aspects of remediation. The Remediation Foreman and the CCA may or may not be the same person.
- The CCA must be current with all Best Management Practices (BMPs) used in crop production including use of new equipment, conservation tillage systems, fertility practices, etc. The CCA would consult with each landowner and determine, prior to land remediation (i.e., clean-up), what equipment, materials and techniques are required to rehabilitate the unique features of each property.
- The CCA should discuss with each landowner the option to overwinter the topsoil pile and replace the topsoil on the field in the year following construction. If construction is delayed by wet weather, a decision could be made with the landowner to minimize the use of large dozers and hi-hoe equipment and/or move the work and resources into the following year.
- The CCA would also consult with each landowner on other issues such as tile drainage prior to topsoil replacement, acceptance of lower quality topsoil for subsidence areas and the stone picking requirement for each property.

- A distinct Remediation Phase, with a separate budget, would provide the Foreman/CCA with the flexibility to source tillage and seeding equipment for specialized clean-up procedures from the landowners themselves or other local suppliers. This would minimize the use of construction contractor preferred equipment and perhaps decrease the cost of clean-up by allowing landowners to perform more secondary tillage operations.
- The roles of the Lands Agent, Soils Inspector, CCA, and Construction Monitor should be revised to ensure they are complementary within the organizational structure of the project.

6.2 CONSTRUCTION MONITOR SERVICES

6.2.1 Team Approach To Construction Monitor Services

Discussion:

The use of a team of three independent agricultural consultants was unique to Union Gas and the historical provision of Construction Monitor services. In general the CMT members felt the team approach was very effective and added value to the Monitor services. The CMT focused on maintaining a professional relationship with all Union Gas Inspectors and Contractor employees.

Strengths:

- An experienced professional was on-site each day. This promoted consistent, high quality monitoring; a continuous ability to interact knowledgeably with other professionals; and an enhanced understanding of rationales behind decisions.
- The team approach provided a forum for three professionals with different areas of specialty to come together (by phone or meeting) to discuss and reach a consensus of opinion and approach regarding construction activities, site conditions and potential impacts on the land.

Challenges:

2. The consistency in documentation of observations and level of communication by three individuals was an ongoing challenge.

Recommendation:

2. *A checklist for each property to standardize the process of documenting observations for each property and to list key steps in pipeline construction and clean-up could be developed.* The checklist should be completed by the on-site Monitor. It also should provide additional documented assurance that each property was observed regularly, consistently and during key activities.

6.2.2 Construction Monitor Committee

Discussion:

The CMT reported directly to the CMC. Jane Sadler Richards, CMT, and Gerry Mallette, CMC, were the designated lead contacts. This arrangement worked very well to resolve day-to-day concerns and questions. However, the CMT did not

receive feedback for those items requiring follow-up by the CMC as a whole or by the Landowner Representative of the CMC. This resulted in uncertainty about how best to effect two-way communications between the CMT and the CMC as a whole. For example:

- a) An email was sent to the CMC on September 25, 2007 with a request to review and confirm or modify the approach and methods used by the CMT to monitor the work on the pipeline. A Committee response in writing was requested. No return communication from the CMC as a whole was received. Jane Sadler Richards later followed up by telephone with the Union Gas and Landowner Representatives and received their individual verbal comments on the approach and methods.
- b) The CMT was not sure whether reported items of potential concern to individual landowners were communicated to affected landowners by the CMC Landowner Representative. No return communication from the CMC was received with regard to these potential action items. For example, on May 23, 2008 (see Daily Report) the CMT reported six piles of stones were unloaded in a landowner's bush by the contractor's field crew. These stones should have been transported to the closest road access point for removal from the property. The CMT received no verification this observation was communicated by the CMC Landowner Representative to the affected landowner. Since the stone piles in the bush were not removed, the CMT assumed the landowner remained unaware of the incident.

Recommendations:

3. *The CMC should appoint a communications coordinator to ensure all requests from the CMT to the CMC are responded to not only on a day-to-day basis but also when the CMC needs to meet to prepare a joint response. The role of communications coordinator could rotate on a one or two month basis amongst CMC members.*
4. *If the CMT role is not modified to allow them to communicate directly with landowners along the pipeline, then a clear mandate must be given to the CMC Landowner Representative or their delegate to communicate issues regarding individual lands to each affected landowner within a specified time frame.*

6.3 COMMUNICATIONS

Discussion:

The Communication Protocol (Appendix C) used between CMT members worked well during the project.

Communications between the CMT and Union Gas and its contractors were very positive. Management and workers were highly responsive to comments and questions made by the CMT. For example, the CMT and Soils Inspector regularly discussed soil-related procedures. The CMT gained a better understanding of why certain construction and clean-up practices were used and the Soils Inspector

gained a better understanding of why the CMT was questioning or concerned about impacts on the land. These discussions lead to a mutual respect for each others point of view. Clarification provided by the Soils Inspector and Lands Agent was crucial to the work performed by the CMT. Without it the CMT would have made several comments in the daily report records that were not necessary.

In general, the CMT Contact Reports were used to document discussions between the on-site Monitor and other workers or landowners involved in the pipeline project. These reports were a very important component of the Communications Protocol because they were used by the CMC and the CMT to stay abreast of ongoing discussions and the resolution of issues. The CMT Contact Reports were sometimes used to document specific issues and discussions resulting from construction and clean-up procedures. For example, a series of Contact Reports (see 4 and 5 Oct 07) documented several site meetings held at property #027 to address the re-shaping of the steep slopes and stream banks on this land. The on-site Monitor was invited by the landowner to attend these meetings due to the sensitivity of this issue. Copies of the Contact Reports were provided to the Lands Agent and the landowner for their reference.

Three different Lands Agents were used during this project: the first in the pre-construction meetings; the second during construction and clean-up in 2007; and the third during clean-up in 2008. This situation sometimes lead to a significant disconnect in communications between the Lands Agent and a landowner. For example, a disagreement regarding the scope of clean-up activities at properties #052 and #054 developed between the contractor and the landowners. Resolution cost Union Gas and the landowners extra time and money. In the opinion of the CMT, the disagreement had a negative impact on the land because field work was delayed until late fall and by then working conditions were less than ideal. The landowners understood they had the option to stop work until spring but one of them indicated to the CMT that he just wanted the work done so the issue would go away and he could get back to normal operations.

During construction and clean-up in 2007, the Lands Agent did not have a laptop computer or email access, which hindered efficient communications with the CMT especially related to updates to the line list (see section 6.4 On-site Observations - General).

Recommendations:

5. *The Communications Protocol should be updated and used by the CMT during future pipeline projects.*
6. *Two-way discussions between the on-site Monitor and pipeline staff should continue to provide the CMT with the best opportunity to understand construction and clean-up activities in progress.*
7. *The Contact Reporting system should be maintained for future projects and the CMT should have the discretion to forward copies of a Contact Report to all third parties mentioned or involved in the discussion, issue or site meeting – including*

the affected landowner(s). The Contact Report could be enhanced to include landowner contacts initiated by the CMT to advise them of potential items they may want to follow-up on with regard to impacts of the construction and clean-up activities on their land. This would allow the CMT to identify potential action items, shift the responsibility for follow-up to the parties involved and eliminate the need for the CMC Landowner Representative to contact affected landowners.

8. *Surveys involving all parties in the pipeline project could be used to measure changes in levels of communication, knowledge and satisfaction regarding respective roles, responsibilities and procedures during the project.*
9. *The same Lands Agent should represent Union Gas during both the pre-construction meetings with landowners and the on-site construction and remediation work.* This should enhance relationships and communications between parties.
10. *The on-site Lands Agent should have a computer and email access to improve general communications and to assist the CMT with effective communication between Union Gas and landowners.*

6.4 ON-SITE OBSERVATIONS – GENERAL

Observations by the CMT were based on activities along the ROW, and interaction with Union Gas, the construction contractor and landowners who were on-site to view or approve the work. The CMT regularly observed Union Gas and its contractors completing the pipeline project on properties without obvious landowner intervention. However, since the role description for the CMT did not allow the CMT to initiate contact with landowners, there was no opportunity to determine the level of landowner satisfaction with the performance of the company relative to the landowners' expectations. During the course of the pipeline project, the CMT regularly observed practices that met or exceeded the CMT's performance expectations with regard to construction impacts, clean-up and rehabilitation of the land. Pipeline workers relied on project documents for guidance, and their training and experience to perform their duties. There were exceptions, however, where Union Gas and/or its contractors did not meet the CMT's or a landowner's expectations.

6.4.1 Documents

Discussion:

Four documents were important to meeting agreements between Union Gas and landowners:

1. Letter of Understanding (LOU)
2. Union Gas [landowner] Interview Sheet
3. Line list
4. Clean-up Procedure (draft)

Also, alternative or additional verbal arrangements by Union Gas and landowners were made and revised on a daily basis as the work progressed.

1. Letter of Understanding

A review of the Letter of Understanding (LOU) suggested:

- The LOU document is a product of years of pipeline construction and agricultural land rehabilitation.
- The LOU document provides a common framework for negotiation of compensation and services between the company and individual landowners.
- The information in the LOU is complex and could overwhelm some landowners, especially those with no experience in pipeline construction.
- The LOU includes negotiation to establish financial compensation for the Land Rights and Damages outlined in Appendix "A": Settlement of the LOU. During this project, the CMT heard this negotiation occurred during the pre-construction meeting between the Lands Agent and the landowner. The CMT is concerned that, at least for some landowners, the focus of the pre-construction meetings may have centred on financial compensation without sufficient focus on construction impacts and remediation options.
- Specific concerns regarding items in the LOU are listed below.

Table 6.1: CMT List Of Concerns Regarding The LOU

Section 1: Pipeline Construction Procedures in Letter of Understanding (LOU)	CMT Concern
Section 1 of the LOU regularly uses the phrase 'at the request of the landowner' ...	No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might request or not request a specified procedure.
a) ...The Company will strip topsoil from over the pipeline trench and adjacent subsoil storage area. ...	These words were inconsistent with the Line List which stated 'ditch and spoil side'. Inconsistency in terminology can cause confusion, especially for those who do not work in the pipeline industry.
a) ...The Company will strip topsoil across the entire width of the easement at the request of the landowner...	No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might choose or not choose a full strip of topsoil on their property. The CMT had particular concerns about the advisability of partial stripping and the potential impact of this procedure on the land (see section 6.4.7).
(e) Whenever possible, all vehicles and equipment will travel on the trench line.	No process to direct vehicle traffic over the trench line was evident on-site.
(h) At the request of the landowner topsoil will be over-wintered and replaced the following year.	No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might choose or not choose to over-winter their topsoil.
(l) At the request of the landowner, the Company agrees to retain an independent consultant to carry out tests along the pipeline to monitor soils and crop productivity. As part of this testing, a soil specialist will conduct comparative compaction testing of the subsoils and NPK	The CMT was on-site during every day of construction and remediation. They were not aware of the presence of any independent consultant conducting tests along the pipeline. Best practice suggests the consultant would be on-site before, during and after construction to obtain test data (following a BACI design i.e., before vs after, control vs impact). The CMT concluded none of the 46 landowners requested an independent consultant before or during the

**Section 1: Pipeline Construction
Procedures in Letter of
Understanding (LOU)**

(nitrogen, phosphorus, potassium) testing and testing of pH levels on and off the easement after construction. Global positioning System (GPS) equipment may be used to identify all test locations. The Company further agrees to implement all commercially reasonable measures, where recommended by the soil specialist to remediate the soil.

(m) After topsoil replacement, the topsoil will be tilled (see section k) and stones picked. If requested by the landowner, the Company will cultivate the topsoil or make compensating arrangements with the landowner to perform such work. The request by the landowner must be made during the pre-construction interview in order to be coordinated with the construction process. After cultivation the Company will pick stones again. If requested by the landowner, the Company will return in the year following construction and chisel plough or cultivate to the depth of the topsoil. When necessary to accommodate planting schedules, the landowners should perform cultivating and/or chisel ploughing themselves at the Company's expense, provided the need for this work has been agreed upon in advance (see Schedule of Rates attached).

(o) subsection 5. Other areas recommended by the drainage consultant. ... In areas where topsoil has been stripped, and at the request of the landowner, the company will complete post-construction tile installation and repairs prior to topsoil replacement.

(s) The landowner will execute a

CMT Concern

project. This suggested the landowners were not sufficiently well informed about why and when they might choose or not choose to have a consultant test their lands.

Item (l) takes a 'wait and see' approach to remediation and puts the onus on the landowner to pursue Union Gas to exercise this option, especially if the landowner waits until after construction is completed.

It is not clear whether the 'independent consultant' and the 'soil specialist' are the same or different persons.

If testing is initiated after construction is completed, this type of issue may take months or years to resolve since field data are collected on a seasonal basis.

A proactive approach to agricultural land remediation suggests measures required to remediate soil fertility for optimum crop production e.g., application of macro-nutrients (N-P-K) to boost soil fertility in the year following construction, should be taken to offset the risk that remediation procedures were not as effective as expected. Finally, this item creates potential conflicts with item (bb) listed below.

No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might request or not request this procedure. Also, the request must be made during the pre-construction interview [CMT assumed this meant the pre-construction meeting with the Lands Agent] before the landowner has had sufficient time to consider all the options available to them.

No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might request or not request this procedure.

The CMT did not have the mandate or the information to

Section 1: Pipeline Construction Procedures in Letter of Understanding (LOU)	CMT Concern
Clean-up Acknowledgement when he/she is satisfied with the clean-up operations described in Paragraph 1. (h) through (q). ...	review if or how signing the Clean-up Acknowledgement affected landowner requests for construction and remediation (i.e., clean-up) procedures, or the links, if any, with financial compensation.
(x) The Company's Landowner Complaint Tracking system shall be available to landowners for the proposed construction.	The CMT did not ask and Union Gas did not offer to provide the CMT with access to this information. The CMT was not aware of any complaints beyond those documented in the reports in the appendices of the final report.
(y) The Company shall pay the costs of independent consultants satisfactory to both the landowner and the Company to resolve site specific disputes involving affected lands on a binding basis concerning the following: ... [Topics related to: topsoil, compensation for specialty crops, and resolution of future crop claims.]	No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might request or not request this procedure.
(bb) Any imported topsoil shall be natural, cultivated, medium loam, neither clay or sandy in nature, capable of heavy agricultural growths and be from a source approved by the landowner.	No educational program or materials were provided to the CMT to indicate landowners were sufficiently well informed about why they might request or not request this procedure. The CMT participated in one situation (see section 6.1, example 2. properties #037 and 038) where this clause of the LOU was referenced. It was clear to the CMT that the Union Gas representatives and their contractor, and the landowners were not 'sufficiently well informed' about clause (bb). The CMT concluded that, although topsoil was trucked onto the pipeline on a regular basis during the project, no landowner had challenged the quality of the topsoil nor exercised their right to approve the source.

2. Union Gas [landowner] Interview Sheet

The Union Gas [landowner] Interview Sheet appeared to record changes from the initial interview held during the project Environmental Assessment (E.A.) and additional information regarding individual properties. The wording in the Union Gas [landowner] Interview Sheet introduced some inconsistencies in terminology e.g., the term 'topsoil stripping' indicated in Part B: Lands Agent Pre-Construction Check List was different than in either the LOU or the Line List i.e., the options listed were 'ditch and working side' or 'full easement', respectfully, which caused confusion during the project.

Also, the lack of detail in the Union Gas [landowner] Interview Sheet may have created confusion for landowners about Union Gas's commitments. For example the landowner of property #027 felt Union Gas had agreed to rehabilitate the steep slopes on their property. The landowner believed a survey of the slopes was 'promised' during a pre-construction meeting but this survey did not occur and the documents provided to the Lands Agent during construction did not reference a survey of the slopes on the property.

3. Line List

A list of property-specific Union Gas/landowner understandings and/or action items related to construction activities (called the Line List) was provided to the CMT. It was understood that the Line List was generated by the Lands Agent from the pre-construction meeting and subsequent follow-up. However, the CMT observed on several occasions that the Line List was incomplete or inaccurate. Also, it was apparent that, as construction progressed, changes to the Line List were verbally agreed to between the Lands Agent and a landowner but not always updated on the Line List. The CMT discussed this situation with Union Gas and improvements to the process were made immediately. However, the CMT continued to find it challenging to remain up-to-date with individual landowner requirements or requests and often relied on the Lands Agent to verbally communicate changes or landowner concerns.

4. Clean-up Procedures (draft 07.08.17)

The CMT was provided with a draft clean-up procedure for reference during on-site monitoring (see also section 6.1). It appeared to the CMT that the focus of clean-up procedures was to move as quickly as possible to complete the entire project in the construction year to maximize use of available equipment and avoid the expense of significant clean-up efforts in the year following construction. As clean-up procedures carried on until November 16, 2007 this increased the risk of soil compaction, especially since clean-up on properties more prone to compaction were left until the end of the 2007 program.

The CMT also observed dozers working on the storage area as soil was moved from and to the ROW. Rehabilitation of storage areas consisted of cultivation of soil surface after soil piles were moved per the draft Clean-up procedures. The potential for compaction due to dozer activity when stripped topsoil was piled and again when excess subsoil was removed and topsoil was replaced on the ROW, was not known.



Recommendations:

11. *Documents involving landowner interests should be reviewed to eliminate inconsistencies and streamlined for ease of transfer of information from negotiated terms to a working list of commitments that can be updated as work progresses.*
12. *A procedure for timely update and distribution of the Line List (or applicable sections) to those involved including the affected landowner(s) would improve communications.*
13. *It is essential to maintain flexibility in the field to make alternative or additional verbal commitments between Union Gas and the landowner to accommodate changing field conditions or unforeseen circumstances. Changes in commitments, however, must be documented and circulated to affected parties within 24 hrs of discussion.*
14. *The clean-up procedure document should clearly identify what practices will occur on each type of land (i.e., field crop, forage crop, pasture, natural lands, woodlots) and on each section of the ROW (i.e., working area, trench area, storage area).*
15. *Exceptions to the standard procedure should be identified in each document.*
16. *An education program aimed at ensuring landowners have enough information to make informed decisions on construction and remediation options for their land must be provided.*
 For example, the education program could include a factsheet explaining the procedures used in pipeline construction. This factsheet would outline the steps the Contractor will take to prepare the area for construction, the steps required for the installation of the pipeline and the clean-up procedures involved. The factsheet could be used in the pre-construction meeting to review the construction activities in relation to an individual landowner's property. This would allow each landowner to visualize the construction on their property and help them indicate any special needs related to their properties. Another factsheet could be developed to provide Union Gas and landowners with relevant information on Best Management Practices (BMPs) related to land management options during and after pipeline construction.
17. *Landowners could be provided with the option to hire a consulting agrologist e.g., CCA, to attend an education program on their behalf so the consultant can make recommendations to the landowner on what construction and remediation options are best suited for their land.*

6.4.2 Pre-Construction Meetings Between Lands Agent And Landowners**Discussion:**

A Lands Agent for Union Gas met with landowners several months prior to construction to discuss activities related to the pipeline project and to identify and address landowner concerns. The CMT heard comments from landowners during the course of the project that what the landowner envisioned during the pre-construction meetings did not always match the reality they faced during construction and clean-up.

Recommendations:

18. *A minimum of two one-on-one landowner meetings should be held during the pre-construction period. For example, the first meeting could be used to view educational materials, including visuals such as a video of construction and remediation (i.e., clean-up) practices, and to initiate discussions on how the project could affect the landowner's property and operations. A second meeting could be used to review construction and remediation practices again, to answer questions/concerns arising from the first meeting, and to discuss/confirm specific requirements for construction and remediation on each property.*
19. *At each pre-construction meeting, the topics, arrangements and action items arising from the meeting must be documented in writing and everyone attending the meeting must initial and receive a copy of the record of the meeting before they leave.*
20. *The timing and methods used to negotiate financial compensation should be examined to ensure financial concerns do not distract the parties from construction and remediation concerns.*

6.4.3 Participation Of On-Site Construction Monitor In Weekly Landowner/Union Gas Meetings

Discussion:

Occasionally the on-site Monitor was invited by Union Gas or the Landowner Representative to attend the weekly landowner/Union Gas meeting to discuss the progress of construction activity along the ROW. These meetings were very informative and assisted the CMT in understanding the concerns and current issues of each party. The CMT observed that while items of concern were discussed and a course of action agreed to at each meeting there was no review of the status of a running list of previous concerns.

Recommendations:

21. *The on-site Monitor should attend the weekly Union Gas/landowner meetings on a regular basis. This would improve the CMT's understanding of issues and their communication with the parties.*
22. *A list of action items and responsibilities for follow-up could be prepared and updated at each weekly meeting to track the status and resolution of concerns. Action notes could be circulated by email to those involved including off-duty members of the CMT.*

6.4.4 Management of Unique Landowner Needs and Sensitive Lands

Discussion:

The CMT observed the occasional landowner or property that required heightened attention to communications and/or follow-up to ensure landowner requests/expectations were met. The CMT also observed that some landowner requests did not meet agricultural Best Management Practices (BMPs).

For example, one landowner with a very unique pasture and creek on the ROW (#027) requested the steep slopes of the pasture be recreated after the pipeline

trench was backfilled. The communication of this request was not passed on effectively to the contractor and subsequently the landowner required several slopes to be re-graded with a bulldozer to return them to their original grade and shape. Better identification of the special needs of this property and landowner, along with timely communication amongst all parties, would have improved the relationship between Union Gas and the landowner, and saved the expense of moving equipment back to the site to work on the slopes.

This property also included a low slope, cattle crossing through the creek that was difficult to return to its original condition with the construction materials used by the contractor. However, the cattle crossing through the creek was not considered an agricultural BMP by the CMT. Consultation with the landowner and tenant farmer during the pre-construction meeting may have identified an alternative system for providing access and/or water for the cattle and may have eliminated the need to rebuild the cattle crossing.



Recommendations:

23. *Unique landowner needs and sensitive lands should be identified as soon as possible in the project to ensure adequate and timely follow-up.*
24. *Plans for rehabilitating each property should include consideration of BMPs.*

6.4.5 Risk Management On Properties With Soybean Cyst Nematode

Discussion:

The Union Gas NPS 48 Strathroy Lobo pipeline ROW crossed several properties with detected levels of soil-borne soybean cyst nematodes. This pest can cause a significant negative impact on crop yield when present in soil where soybeans are grown. It was incumbent on Union Gas to minimize the risk of transfer of this pest from one property or field to the next due to construction activity.

During the course of construction activities, all members of the CMT observed and discussed amongst themselves and with Union Gas i.e., the Soils Inspector, the efforts to minimize the risk of transfer of soybean cyst nematodes from one location to another. It was agreed the risk of transfer could not be eliminated due to

uncontrollable factors such as: human (ATV and/or farm equipment) and animal movement across the ROW; and wind-blown topsoil. Risk was minimized, however, by: stripping all of the infected topsoil from the ROW and separating it from the ROW using a filter fence to control the movement of soil by water erosion onto the ROW; controlling the movement of construction equipment on and off the affected portions of the ROW; controlling the transfer of soil on worker boots; removing mud/soil and then rinsing construction equipment with a chlorine solution; and rinsing affected roadways with a chlorine solution.



Recommendations:

25. *Significant improvement in the effectiveness and efficiency of the equipment wash procedures could be achieved with the establishment of an industrial-sized, dedicated wash station.*

6.4.6 Partial Strip Versus Full Strip Of Topsoil

Discussion:

During the course of construction activities, all members of the CMT observed and discussed amongst themselves and with Union Gas, i.e., the Soils Inspector, the impacts of partial versus full topsoil stripping on the land.

In the opinion of the CMT there are several advantages to a full topsoil stripping of the ROW when considering potential impacts on the land:

- Prevents deep rutting of the topsoil in the working (also called travel) area of the ROW when moist or wet soil conditions are encountered;
- Prevents mixing of topsoil with subsoil due to construction traffic;
- Eliminates compaction of the topsoil by allowing construction traffic to occur on the subsoil; and
- Improves potential crop growth conditions in the following years because the subsoil is rehabilitated first in a separate step by deep ripping or subsoiling and then the topsoil is replaced and rehabilitated in a separate step by subsoiling and cultivating. This combination of steps should provide the best opportunity to

effectively rehabilitate topsoil and subsoil after construction activities. It is recognized, however, that soil and weather conditions have a significant impact on the potential success of these rehabilitation efforts.



Recommendations:

26. *Landowners should be provided with agronomic information and/or consultation before making a decision to allow a partial strip rather than a full strip of topsoil on their lands during construction.*
27. *A factsheet could be developed to provide appropriate agronomic information on each choice.*

6.4.7 Stone Picking

Discussion:

Specifications for the Union Gas NPS 48 Strathroy Lobo Pipeline Project required that the clean-up procedure remove all stones greater than two inches in diameter from the surface of the subsoil and the topsoil. This specification was too restrictive and exceeded normal stone picking practices for this agricultural area.



Recommendations:

28. The specifications and procedures for stone picking should be revised to allow flexibility to adjust the requirements relative to natural soil conditions.

6.4.8 Seeding For Vegetative Cover**Discussion:**

Several pasture and grass areas along the ROW required seeding to provide vegetative cover to control soil erosion. Several of these areas had steep slopes where establishment of vegetative cover was critical prior to winter to prevent soil erosion during runoff in winter and the spring of 2008. These properties could have been given a higher priority for clean-up and seeding to allow some growth of vegetation before the cold weather in late fall.

Recommendations:

29. Timely seeding on a property-by-property basis should be required rather than seeding all or a group of properties after construction is completed.

6.4.9 Depth Of Topsoil**Discussion:**

Topsoil is extremely important to agricultural productivity. Therefore the post-construction uniformity of depth of topsoil on the ROW could affect the post-construction uniformity of crop growth. The CMT observed that topsoil was spread back over exposed subsoil on the ROW by competent operators. The general objective for topsoil depth was approximately 8" (20 cm) after spreading. It appeared that actual depth of topsoil was not systematically checked for each property and there were no data to support the widespread achievement of this objective. Also, it was understood by the CMT there were no plans to check the depth of topsoil in 2008 after the topsoil settled over winter. Therefore there was no way to confirm the consistency of post-construction depth of topsoil for each property.

Recommendations:

30. Consistency of depth of topsoil across each property should be confirmed.

6.4.10 Depth Of Pipeline Soil Cover**Discussion:**

Adequate soil cover over existing pipelines is extremely important to maintaining the safety of agricultural workers using farm machinery over pipelines and to maintaining the integrity of the pipeline system. Soil erosion by wind, water and tillage could decrease the anticipated depth of soil cover over a pipeline and increase the risk of farm machinery e.g., tillage equipment, hitting the pipeline. The CMT learned that both Union Gas and landowners are very interested in knowing when the depth of soil cover over a pipeline is approaching or has reached a depth that could increase the risk of accidents for agricultural workers and the pipeline.

Recommendations:

31. *Notification procedures should be reviewed to require Union Gas and landowners to contact each other within a specified timeframe when one party has new information about depth of soil cover over a pipeline.* This information could provide assurances to both Union Gas and landowners that adequate soil cover remains in place or, more importantly, alert both Union Gas and landowners that adequate cover is not in place and that steps must be taken by the landowner to minimize risks until adequate soil cover can be re-established by Union Gas.

6.4.11 Timing Of Subsoiling And Tile Drainage Installation**Discussion:**

The CMT observed an overlap of 'best practice' objectives between rehabilitation of compacted subsoil/topsoil and installation of tile drainage on the ROW. Deep ripping and subsoiling of subsoil was required to relieve soil compaction due to construction activities before topsoil was replaced on the ROW. However, best practice for the installation of tile drainage lines suggests that tile lines should be laid on a solid bed of subsoil for best long term drainage results. Tiling soon after rehabilitation of subsoil/topsoil meant the tile lines could be laid in disturbed subsoil that could settle unevenly over time and cause the tile lines to 'undulate' rather than lie flat in the subsoil. This situation, if it occurred, could compromise the effectiveness of the tile lines under certain field conditions e.g., when free flow of drained water is impeded by undulations in the tile lines.

Recommendations:

32. *Landowners should be provided with agronomic information and/or consultation before making a decision to allow tile drainage installation soon after subsoil/topsoil rehabilitation.*
33. *A factsheet could be developed to provide appropriate agronomic information on available choices.*

6.4.12 Timing Of Clean-Up**Discussion:**

At the end of the construction/growing season the weather can become unsettled very quickly. This effectively decreases the number of days when soil moisture conditions are good to ideal for completing clean-up tasks e.g., subsoiling, cultivating stone picking, seeding of vegetative cover. However, when given the choice of working in moist to wet conditions in fall versus moist to wet conditions in spring, landowners will generally consent to continued work in the fall. There are various agronomic reasons for this decision. In the fall the subsoil may be dryer than in the spring and therefore there is less potential for soil compaction due to fall work. In the fall there are generally fewer tasks competing for resources and more time available to do the work than in the spring. In the fall, the possibility exists that soil compaction, caused by working in moist to wet soil conditions, could be alleviated by frost action during the winter months. The CMT observed during the project that pressure to complete clean-up tasks as soon as possible was not maintained by the contractor toward the end of the project. The CMT noted that timely pipe-laying was

particularly important to the contractor while timely clean-up was particularly important to the landowner.

Recommendations:

34. *Consideration should be given to recognizing and accommodating differences in contractor/landowner priorities in any timelines included in contract and/or landowner agreements.*

35. *The contractor should keep equipment and work crews at full strength to the end of the project so that clean-up proceeds as quickly as possible.*

6.5 ON-SITE OBSERVATIONS – SINGLE PROPERTY

The CMT created an extensive report (Appendices E, F, G) and photographic record of activities on each property along the ROW. Summaries of construction and clean-up activities for three example properties (#016, #026 and #051) were created from these reports.

6.5.1 Property #016

Construction activity began on July 4, 2007 at property #016 when the access ramp was installed off Walker Line. On July 7th a grader established the topsoil depth and topsoil was stripped on July 9th. A crew moved on-site the next day and began to install the dewatering equipment to lower the water table of this property. Compaction of the subsoil was observed from the dewatering process as excess water from drilling well points was laying on the soil surface.

On July 24th pipe stringing occurred and a dozer was used to level out the ruts made by the pipe trucks in the soft subsoil. From July 26th to 30th the pipe bending, end preparation, welding and coating operations took place and on August 1st the property was used as a staging area for the bore hole under the CNR railway line.

On August 3rd a problem occurred with the CNR bore hole and the hole was enlarged causing excess water in the large trench area. This water was not removed by the dewatering points and subsequently was pumped onto the soil surface between the spoil pile and the topsoil storage area on the north side of the ROW. The water began to flow eastward between the two piles of soil and a berm was constructed to stop the water from flowing the length of the property.

On August 8th the open-cut trench across McEvoy Road was constructed allowing the 48" pipe to be installed along the entire length of property #016. The tie-in process continued for several days and on August 15th backfilling of the trench and removal of the dewatering well points began from the CNR crossing to McEvoy Road. On August 20th a pump was used to help dry out the low lying areas of the property. On August 22nd the subsoil was graded and on August 28th and 29th the topsoil was pulled across the ROW. On September 7th, 8th and 13th the ROW was subsoiled to mitigate compaction from construction activities, and cultivation and clean-up of the ROW were performed on September 22nd.

On May 13th and 14th, 2008, additional topsoil was trucked to property #016 to mitigate soil subsidence over the trench line.



4 Aug 07



14 Aug 07



7 Aug 07



28 Sep 07

Timeline Summary (#016):

Topsoil stripping to trench backfilling = 43 days (July 4th to August 16th)
 Clean-up = 35 days (August 20th to September 22nd, 2007 and May 13th to 14th, 2008)

Landowner Interaction (#016):

This property was used as a staging area for the CNR bore hole and considerable construction traffic occurred under wet conditions as dewatering efforts required the transfer of excess water out of the deep trench. Despite problems that delayed construction of the 48" pipe on this property and the need for additional topsoil in the spring of 2008, the CMT was not aware of any landowner concerns and no site meetings to discuss issues were requested.

6.5.2 Property #026

Construction activity on property #026 began on July 11, 2007 when stumps along the Henderson Drain were removed, erosion control measures were added and the topsoil was stripped on the ROW. From July 27th to August 3rd the pipe stringing,

end preparation, welding and coating operations were completed and the dewatering well points were installed. The dewatering pumps were started on August 4th and pipe trenching took place from August 10th to 13th. The pipe was laid in the trench on August 17th and backfilling occurred on August 18th. On August 27th preparations were made for the open cut crossing of the Henderson Drain and the crossing was completed on August 28th. The tie-ins to the 48" pipe on both sides of the drain were made on August 29th and on August 30th the dewatering well points were removed.

On September 1st the area of the pipeline directly under the high voltage hydro lines was protected with concrete patio stones and all backfilling was completed on this property. From September 4th to 18th the subsoil was graded, topsoil was pulled and deep tillage completed. On September 25th the topsoil was deep tilled and grading occurred on October 4th. The flume in the Henderson drain was removed on October 9th and the fence on the property was repaired on October 30th. The following year on May 24, 2008, the bridge crossing the Henderson Drain was replaced.

Timeline Summary (#026):

Topsoil stripping to trench backfilling = 38 days (July 11th to August 18th)
 Open-cut crossing of Henderson Drain with tie-ins = 3 days (August 28th to 30th)
 Clean-up (including fence installation) = 56 days (September 4th to October 30th)

Landowner Interaction (#026):

All requests for bridge re-building and storage of extraneous material from the open-cut drain crossing were handled by the Lands Agent. The CMT was not aware of any landowner concerns and no site meetings to discuss issues were requested.

6.5.3 Property #051

Construction activity on property #051 began on April 30, 2007 as the property's fence line was used to access the ROW with a rubber tired backhoe for location of field tiles on adjoining land. Topsoil stripping began on July 20th followed by grading of the subsoil on July 27th.

On August 1st pipeline stringing took place. The pipe bending, end preparation, welding and coating occurred from August 10th to 14th. Trenching began on August 27th and the pipe was lowered into the trench on September 8th. From September 13th to 19th the trench was backfilled, leveled, extraneous material was removed from the site, the municipal drain was reconnected and other existing small tiles were repaired.

From October 5th to 17th the stones on the surface of the exposed subsoil were picked. On October 22nd the tile drainage contractor presented the final drawings for tile drain repairs and improvements to alleviate water from exposed artesian springs. On this date significant discussions also occurred about the deep tillage procedure to alleviate the effects of compaction caused by construction and the potential impacts on the placement and proper operation of drainage tile. At the request of the landowner, the topsoil was left in its storage position on the south side of the ROW

until spring 2008. On November 10, 2007 a fence was installed between property #051 and #052.

In 2008 the clean-up procedures continued on property #051. From May 26th to 30th the new tile drains were installed along the 48" pipeline, subsoil was leveled and topsoil was pulled across the ROW. The field was deep-ripped or subsoiled with a para-till machine both on the subsoil and again after the topsoil was pulled. A field cultivator provided the final leveling of the ROW and a final pick of stones was completed before the tenant farmer planted the field to white beans.



10 Aug 07



30 Aug 07



12 Sep 07



12 Sep 07



21 Sep 07



16 Oct 07



16 Oct 07



30 Oct 07

Timeline Summary (#051):

Topsoil stripping to trench backfilling = 60 days (July 20th to September 19th)

Clean-up = 237 days (October 5, 2007 to May 30, 2008)

Landowner Interaction (#051):

Several site meetings were held with the landowner to discuss construction and clean-up issues. The landowner contacted the CMT on September 7, 2007 to discuss concerns about free flowing water from springs in the trench on property #051. On September 12, 2007 the area used for storage of topsoil on the property was identified as a problem and this was communicated to the CMT through the CMC Landowner Representative.

On October 22 a site meeting was held to discuss drainage plans for fall 2007 and the landowner communicated her request to leave topsoil over the winter and replace it in spring 2008 when new tiles bordering the 48" pipeline were installed. This request was previously made during the pre-construction interview. This landowner was also concerned about follow-up contact with the Union Gas Lands Agent attending the pre-construction meeting and commented that a reply about compensation for construction activities was not received.

6.5.4 Timeline Summary For Example Properties On The NPS 48 Strathroy Lobo Pipeline Project

The following summarizes the timelines, unique features and landowner concerns for the above example properties:

Property #	Construction Activities (days elapsed)	Clean-up Activities (days elapsed)	Unique Features and Landowner Concerns Documented by the CMT
016	43	33	CNR crossing and McEvoy/Walker Line intersection CMT was not aware of any landowner concerns
026	41	56	Henderson Drain crossing and Hydro tower line CMT was not aware of any landowner concerns
051	60	237	Artesian springs in trench area CMT was aware of significant landowner concerns, which required several site meetings. It was decided to replace topsoil on the ROW in spring 2008.

A review of the Daily and Contact reports for individual properties provided a summary of the timelines for construction and clean-up activities associated with the NPS 48 Strathroy Lobo Pipeline Project. The example properties show that construction (topsoil stripping to backfilling) varied from 41 to 60 days while the time required for all clean-up activities on a property ranged from 33 days to 237 days. Sensitive features played a role in the length of time required to complete construction and clean-up; however the unique needs of the landowner also determined the duration of the project on an individual property.

Recommendations:

36. An analysis of the timelines required for both construction and clean-up activities may help in the allocation of time and resources between the two phases on a pipeline project i.e., construction and remediation.

6.6 ON-SITE DATA

6.6.1 Rainfall And Soil Moisture Content

Discussion:

The method of collection of rainfall data appeared to be adequate for the purposes of the project. Decisions on wet soil shutdown (WSS) were based on amount of rainfall and a visual assessment of soil conditions by the Soils Inspector. On-site observations made by the CMT generally supported the WSS decisions made by the Soils Inspector. It should be noted, however, that decisions regarding when and when not to implement a WSS provide an opportunity for contentious debate. There are methods available to assess moisture conditions in the field. Having this information available could be helpful in resolving issues associated with decisions on WSS.

Recommendations:

37. Consideration should be given to establishing a method for scientifically documenting specific soil conditions on those days when it is difficult to visually assess the need for a wet soil shutdown.

6.6.2 Soil Compaction

Discussion:

The penetrometer data were obtained from within the ROW and immediately after deep tillage when the soil was at its 'fluffiest'. The penetrometer data would be more useful if it were collected using a BACI design i.e., before vs after and control vs impact, notwithstanding the instrument's limitations under compacted or 'settled' soil conditions.

Recommendations:

38. A review of the objectives, and the scientific and statistical methods available to assess the agronomic effectiveness of remediation procedures should be conducted.

6.7 REPORTING STRUCTURE

Discussion:

One to two hours per day were spent preparing various reports related to the on-site Monitor service. The CMT streamlined this process as much as possible during the course of the construction work.

Recommendations:

39. *Maximum use of innovations in electronic technology should improve the efficiency of daily report preparation in the future.*

7 CONCLUSION

The CMT recognized Union Gas took positive steps to address the impacts of construction, remediate affected lands and improve landowner relations during the NPS 48 Strathroy Lobo Pipeline Project. The CMT recognized the difficulties experienced by those landowners who contacted the CMT when construction of the pipeline did not occur as they anticipated. The CMT concluded more work is required to balance the need to construct new pipeline with the need to mitigate the impacts of construction on the land through which the pipeline is built. However, the CMT observed good will amongst individuals on a daily basis, which suggested continued progress is possible. The recommendations in this report provide direction for positive change in the future. These recommendations may be particularly important when construction conditions are not as ideal as those experienced during the NPS 48 Strathroy Lobo Pipeline Project.

Appendix A: Statement Of Work

The following information was provided by the Construction Monitor Committee (CMC) during the consultant selection process:

CONSTRUCTION MONITOR ROLE DESCRIPTION

Accountability

The Construction Monitor (Monitor) is accountable to and reports directly to the Construction Monitor Committee (Committee).

Scope

The Monitor shall observe and report on pipeline construction activities for the 2007 Union Gas Limited (Union) 48" pipeline from Strathroy to Lobo. Observation shall be limited to impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as Wet Soil Shutdown (WSS) events. The Monitor shall review construction activities for compliance with the Ontario Energy Board (OEB) Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union Gas and all specific construction commitments included in Union's construction contract.

The WSS practice is defined in the LOU. The Monitor does not have the authority to decide when WSS is required. When requested by an authorized representative of the Joint Committee (composed of landowner and Union Gas representatives) the Monitor shall render an opinion of whether or not construction work took place in wet soil conditions as defined in the LOU.

The Monitor shall limit contact with landowners to situations where a specific request is made by the landowner or the Committee. When a request is received, the Monitor shall respond within 24 hours. The Monitor shall be present on the construction work site and will be subject to the safety program established by the pipeline contractor, including safety training and qualification prior to entering the work site.

Deliverables

Reports shall be completed in accordance with the sample documents attached hereto. Such reports shall not be subjected to review or editing by any member of the Committee or their sponsor organizations prior to submission. Daily reports shall be submitted simultaneously and directly to the GAPLO and Union Gas Committee members. Weekly reports shall be submitted simultaneously and directly to all members of the Committee. A final report generally summarizing all reports shall be provided at the end of the contract term. The report shall contain at a minimum, recommendations in respect to the following:

- Communications with landowners and the Committee.
- Potential construction activity improvements.
- Reporting requirements.

The Monitor shall verbally report any violations of conditions, landowner agreements or specifications immediately to the Union Gas inspector on-site and in writing to the Chief Inspector and to members of the Committee as soon as possible.

Qualifications

1. Graduate of a recognized Community College or University with a background in environmental sciences or engineering or technology.
2. Experience with heavy construction, preferably in pipeline construction.
3. Knowledge and experience with soil characteristics and agricultural practices.

4. Proven ability to understand and interpret technical and legal specifications and permits.
The 48" Strathroy Lobo project will require familiarity with:
 - a. The OEB Conditions of Approval
 - b. Contents of the construction contract including
 - i. General Conditions of the Contract
 - ii. Construction Specifications
 - iii. Construction Drawings
 - iv. Special Landowner Requirements
 - v. Environmental Permits and the Environmental Construction Plan
 - c. Environmental Assessment
5. Excellent communications skills and interpersonal skills exhibiting tact and diplomacy.
6. Ability to provide independent judgement so that an unbiased third party viewpoint is maintained.

Equipment

The Monitor shall have the following equipment available and operable at all times:

- Pickup truck with four wheel drive capability.
- Insurance in accordance with Section 17 of the Master Services Agreement.
- Laptop computer and printer.
- Digital still image and video capture equipment. Film still image equipment.
- Cell phone with message service.
- Personal protection safety equipment (hard hat, safety boots, eye protection, safety vest).

Term and Hours

Term: Nominal February to December 2007

Hours: As required, not to exceed 10 hours per day, 6 days per week.

Appendix B: Reference Documents

No.	Document Title and Contents	Source
1	Ontario Energy Board Decision and Order EB-2005-0550 re an Application by Union Gas Limited to construct natural gas pipeline <ul style="list-style-type: none"> ▪ includes Appendix A: Conditions of Approval 	Ontario Energy Board web site
2	Union Gas Limited Trafalgar Facilities Expansion Program 2007 Construction NPS 48 Strathroy Lobo Facilities Agreement <ul style="list-style-type: none"> ▪ Schedule 1 – General Conditions ▪ Schedule 2 – Technical Specifications and Drawings ▪ Schedule 3 – Special Instructions ▪ Schedule 4 – Price Schedule ▪ Addenda 	Union Gas
3	NPS 48 Strathroy Lobo Pipeline Construction Contract Schedule 3 Appendix C – Line List with Landowner Commitments; called 'the Line List' <ul style="list-style-type: none"> ▪ Summarized the list of commitments to the landowner as listed in their Letter of Understanding (LOU) ▪ Summarized landowner answers/requests during pre construction interview 	Union Gas; updated verbally by the Lands Agent, or as hand written changes or as a formal revision; copied to each CMT member
4	Union Gas [landowner] Interview Sheet	A landowner
5	Construction Monitor Services Contract NPS 48 Strathroy Lobo Pipeline Construction 2007 / 2008 Between Union Gas Limited and Cordner Science	Union Gas/Cordner Science
6	Daily working schedule <ul style="list-style-type: none"> ▪ Listed daily operations and location of work 	Union Gas from Banister Construction; available daily
7	Aerial photographs (Drawing K041-01 to 03) <ul style="list-style-type: none"> ▪ Showed property boundaries, numbers and landowner names 	Union Gas
8	Map of access points to ROW <ul style="list-style-type: none"> ▪ Kickoff to SF12 	Union Gas
9	Clean-up procedure package (draft 17Aug07) <ul style="list-style-type: none"> ▪ Documented procedure re soils, special instructions, construction specifications and equipment allowances 	Union Gas
10	Pipeline Drawings (Drawing K172 series) <ul style="list-style-type: none"> ▪ Construction alignment sheets and detail drawings ▪ Crossing drawings 	Union Gas; updated once
11	List of property owners and property descriptions	Union Gas
12	Contact List <ul style="list-style-type: none"> ▪ Names and cell numbers of key persons 	Union Gas; updated as needed
13	Efile templates for various reports <ul style="list-style-type: none"> ▪ Daily, Contacts, Wet Soil Shutdown, Weekly Reports 	Union Gas; revised by CMT
14	List of tackifying locations on ROW <ul style="list-style-type: none"> ▪ Locations identified as needing hydro-mulching to hold blowing sand/soil to control blowing sand/soil 	Union Gas
15	Gantt chart of work timelines	Union Gas
16	Incident Notification and Review Guidelines <ul style="list-style-type: none"> ▪ Re safety incidents 	Union Gas
17	Union Gas Limited Major Projects Group Inspector Training & Orientations Pipeline Projects	Union Gas
18	2007 Pocket Ontario OH&S Act & Regulations Consolidated Edition Approved Safety Guide	Union Gas
19	For Pipeline Construction in Canada Issued by Pipe Line Contractors Assoc of Canada 2006	Union Gas
20	Pipeline Lifeline Prepared by the Pipeline Contractors Assoc of Canada	Union Gas

Appendix C: Communications Protocol

CORDNER SCIENCE

Communications Procedure

Construction Monitor Team
NPS 48 Strathroy Lobo Pipeline Construction
2007 / 2008

Revision Number: 0

Reason for Revision:

Effective Date: _____

Submitted By: _____

Title: Jane Sadler Richards
Monitor Supervisor, Construction Monitor Team

Approval Date: _____

Approved By: _____

Title: _____
(Name)

Contents:

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 - 5.3 DAILY REPORT
 - 5.4 WEEKLY REPORT
 - 5.5 WET SOIL SHUTDOWN REPORT
 - 5.6 HEALTH AND SAFETY REPORT
 - 5.7 DOCUMENT FILING

1.0 PURPOSE

The purpose of this document is to outline procedures that the Construction Monitor Team (CMT) will use to ensure the three person rotation works effectively and efficiently. The overall goal is to develop communications that are clear, concise, transparent and timely amongst the CMT members, and between the CMT and the Construction Monitor Committee (CMC).

2.0 SCOPE

This Communications Procedure provides an outline of how verbal and written communications, and related supporting documentation, should be conducted by the CMT.

The Communications Procedure is a 'living document' that will be used on a daily basis by the CMT. As such, it may be revised from time-to-time to reflect ongoing 'best practices' related to communications in the context of this project.

3.0 GENERAL

The CMT provides on-site monitoring of the construction activities related to the NPS 48 Strathroy Lobo Pipeline Construction 2007 / 2008.

4.0 RESPONSIBILITIES

Each member of the CMT is responsible for:

- maintaining open and regular verbal and written communications with members of the CMT and CMC;
- completing, distributing and filing communications documentation in a timely, organized and secure manner; and
- conducting regular 'check backs' on communications documents to assure themselves that follow-up promised or required by them has been addressed.

The CMC is responsible for:

- ensuring that communications from the CMT are responded to in a timely manner, which should allow the CMT to function effectively and efficiently.

5.0 PROCEDURE

Each CMT member will maintain and keep readily available a Field Notebook that includes a hard copy of all communications outlined below.

5.1 Verbal Communications

Verbal discussions, whether by phone or in person, should be documented by the on-site member of the CMT or by the member initiating the call if neither person is on-site. Written documentation of verbal communications should include the following, if applicable:

- Date and time of discussion
- Person initiating the call
- Type of discussion (verbal/in person)
- Parties involved
- Subject of discussion
- Points of discussion
- Decision(s) made, if any
- Action(s) required, if any
- Cross reference(s) to other items (map point, photo, etc.), if any
- Initials of person and date discussion was documented

Each CMT member is required to carry a cell phone with key phone numbers encoded in the system while at the work site or 'on call'.

The CMT member on-site on any given day is required to phone the two other CMT members to provide a brief summary/comment on the day's activities and future items to consider. This practice should remain in place until it is apparent that the communications procedure is working

smoothly, at which time the necessity for a daily verbal debriefing may be re-evaluated and modified.

5.2 Written Communications

Emails or other written communications should indicate the following:

- Date and time of discussion
- Parties involved
- Subject of discussion
- Points of discussion
- Decision(s) made, if any
- Action(s) required, if any
- Cross reference(s) to other items (map point, photo, etc.), if any

ALL emails or other written communications related to the functions of the CMT must be sent directly or copied to the other two members of the CMT as applicable.

5.3 Daily Report

At the end of each work day, the on-site Monitor shall:

- complete the Construction Monitor Contacts Report and insert the related communications documents as listed in the previous sections;
- complete the Construction Monitor Daily Report;
- email a copy of the Daily Report to the CMT and CMC; and
- print, sign, date and insert a copy of the report in the Field Notebook.

5.4 Weekly Report

At the end of each work week, the on-site Monitor shall:

- complete the Construction Monitor Weekly Report;
- email a copy of the Weekly Report to the CMT and CMC; and
- print, sign, date and insert a copy of the report in the Field Notebook.

5.5 Wet Soil Shutdown Report

When wet soil shutdown is ordered, the on-site Monitor shall:

- complete the Construction Monitor Wet Soil Shutdown Report;
- email a copy of the Wet Soil Shutdown Report to the CMT and CMC; and
- print, sign, date and insert a copy of the report in the Field Notebook.

5.6 Health and Safety Report

When an accident/incident occurs that, in the opinion of the on-site Monitor, represents a health and safety concern to CMT members, a report including the following items should be prepared:

- Date and time of incident
- Parties involved
- Nature of incident
- Potential effects on the work
- Action(s) taken, if any
- Notification(s) given to whom
- Signature of report author and date

All accidents, injuries, property damage or negative environmental impacts should be reported to the CMT lead as soon as possible.

NOTE: Give first aid and seek medical attention as required.

NOTE: This report is in addition to normal company and government worker safety procedures.

5.7 Document Filing

A copy of all communications and reports will be maintained by each CMT member in their Field Notebook to provide ongoing reference to previous communications and follow-up. JSR will replace original communications (e.g., write ups of verbal discussions, signed reports) with copies at regular intervals and the originals will be kept on file at the Cordner Science office.

Appendix D: Report Forms

UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE CONSTRUCTION MONITOR DAILY REPORT

Date	Contractor Name	Cordner Science
Report No.	Monitor Name	

LOCATION			
County	Middlesex	Township	Middlesex Centre
Conc		Lot	
From Station	Strathroy	To Station	Lobo

Landowner #s & Names						
SF	Kickoff	Today		SF	6	Today
na				25		
1				26		
2				27		
3				28		
4				SF	7	Today
SF	1	Today		29		
5				30		
6				31		
7				32		
8				33		
9				34		
SF	2	Today		SF	8	Today
10				35		
11				37		
12				38		
SF	3 Bone Yard	Today		41		
13				na		
14				SF	9	Today
15				45		
16				46		
SF	4	Today		47		
18				SF	10	Today
19				48		
20				49		
21				50		
SF	5	Today		51		
22				52		
23				54		
24				SF	11	Today
				na		
				SF	12	Today

Road/Rail/Water Crossings	none
----------------------------------	------

WEATHER (Temperature/Rainfall/ Comment)		Today	
		Forecast	

OPERATIONS					
Clearing		Pipework		Water Crossing	
Stripping		Trenching		Drain Tile Repair	
Grading		Backfilling		Access/Culv/Bridge	
Fencing		Boring		Erosion Control	
Stringing		Road Xing		Clean-up	
Bending		Rail Xing		Other	

PHOTOGRAPHY					
Photographs	Yes		No		Identifiers
Camcorder	Yes		No		Identifiers

COMMENTS		
No. & Property	Pics	Notes

Other Comments – date

Monitor's Signature

NPS 48 Strathroy Lobo Pipeline Project, Union Gas Limited

UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE CONSTRUCTION MONITOR WEEKLY REPORT

Date	Contractor Name	Cordner Science
Report No.	Monitor Name	

WEEK OF	
Monday, (month, day, year)	to Sunday , (month, day, year)

WEATHER	Date(d/m/y)	Temp. (°C)	Comment
Mon			
Tue			
Wed			
Thu			
Fri			
Sat			

CONDITIONS ON THE RIGHT-OF-WAY	
Day(s)	Comments
Mon	
Tue	
Wed	
Thu	
Fri	
Sat	

<u>CONSTRUCTION PROGRESS TO DATE</u>

<u>WET SOIL SHUTDOWN</u>

<u>ANTICIPATED CONSTRUCTION IN SENSITIVE AREAS</u>

SUMMARY OF CONSTRUCTION INSPECTION DAILY REPORTS				
Date	Report #	Pics	Location	Operation
Mon,				
Tue,				
Wed,				
Thu,				
Fri, 1				
Sat,				

SUMMARY OF CONTACTS AND LANDOWNERS OR MONITOR CONCERNS				
Date	Name	File # / Agency	Concerns / Action	Resolved

NPS 48 Strathroy Lobo Pipeline Project, Union Gas Limited

SUMMARY OF CONTACTS AND LANDOWNERS OR MONITOR CONCERNS

Date	Name	File # / Agency	Concerns / Action	Resolved
			-	

SUMMARY RE UNION'S MONITORING PROGRAMS**ADDITIONAL MONITOR COMMENTS**

DISTRIBUTION:
CMC AND CMT

Monitor's Signature

NPS 48 Strathroy Lobo Pipeline Project, Union Gas Limited

UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE CONSTRUCTION WET SOIL SHUTDOWN REPORT

Date Report No.	Contractor Name Monitor Name	Cordner Science
----------------------------------	---	-----------------

LOCATION			
County	Middlesex	Township	Strathroy-Caradoc and Middlesex Centre
Conc		Lot	
From Station	Strathroy	To Station	Lobo

DECISION TO SUSPEND WORK			
Time _____	By	_____	Of _____
All Activities Shut Down?		_____	No _____
Suspended Operations and / or Locations of Work Today			
Continuing Operations and Locations of Work Today			

RAINFALL INFORMATION:

WEATHER REPORT	
Source:	
Yesterday's Rainfall	
Today's Weather	
Tomorrow's Forecast	

GROUND CONDITIONS / GENERAL COMMENTS

Monitor's Signature

ATTACHMENT 13

Union Gas Limited Hamilton to Milton NPS 48 Loop Pipeline

Independent Construction Monitor Final Report

Prepared for:

The Construction Monitor Committee

Zora Crnojacki - Project Advisor, Ontario Energy Board

Rob Marson - Project Manager, Union Gas Limited

Ian Goudy - Chair, Gas Pipeline Landowners of Ontario

December 20 2017

Submitted by:

**Don King MSc CCA
The Soil Resource Group
50 Crimea Street
Guelph, ON
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SOIL RESOURCE GROUP

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Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

1. Executive Summary

Union Gas Limited and the Ontario Energy Board (OEB) arrived at a Settlement Agreement for the construction of approximately 20km of NPS 48 pipeline (48 inch diameter) in an existing pipeline corridor extending from the Hamilton Valve Site to the Milton Valve Site. The Agreement considered issues raised by stakeholders including the Gas Pipeline Landowners of Ontario (GAPLO) that Union Gas appoints an independent construction monitor for construction on the agricultural lands portion. The construction monitor was chosen by a Construction Monitor Committee with a representative from Union Gas, the OEB and GAPLO to report on issues related to a Letter of Understanding (LOU). The LOU negotiated between Union Gas and affected landowners outlines the obligations with respect to: i) the construction of the pipeline; ii) remediation of the landowner's property; and iii) compensation to the landowner for various damages as a result of the construction of the pipeline. The scope of work for the construction monitor did not include part iii) or any financial matters between Union Gas and landowners but were listed as:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union;
3. To review all specific construction commitments included in Union's construction contract;
4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

The Independent Construction Monitor (ICM) role was completed by The Soil Resource Group using a team of three qualified soil science professionals, each with over 25 years of experience working with agricultural soils in Ontario. One of the Monitors was on-site each day throughout the construction period when activities included or may have included agricultural lands. The ICM in its stated role was limited in contact with landowners to situations where a specific request was made by a landowner or the Construction Monitor Committee. Communication with the Construction Monitor Committee was channeled through the Monitor Lead primarily through written weekly monitoring reports as well as conference call and email correspondence to discuss issues of concern and clarification. Daily communication with Union Gas staff was initiated with a 6am Construction Meeting with inspectors held at the Union Gas yard office that outlined the daily work activities and safety issues. Observations of daily activities, soil conditions and related comments or concerns were summarized by the daily ICM and forwarded by the Monitor Lead to the Construction Superintendent.

Communication with the Committee included the submission of weekly reports by the ICM Lead that summarized the monitors daily report observations and concerns for each week. The ICM did not exercise any authority to decide when Wet Soil Shutdown was required and were not requested by the Committee to render an opinion if construction work took place in wet soil conditions as in the LOU. Comments were not received by the OEB representative though points of clarification were discussed

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

over the phone occasionally with the Union Gas and GAPLO committee members separately. Construction issues that were discussed included topsoil stripping method, wet soil shutdown criteria, construction monitor role, soil inspector role, stone picking sufficiency, site specific soil erosion protection. Communications between the ICM team and landowners were minimal as the Land Relations Agent (LRA) was designated as the point of contact for the project. The impact on the agricultural land made up of 30 properties was the focus of monitoring activities.

The attention committed overall by the construction team in following the LOU was recognized by all three members of the ICM team. It must also be recognized that observance of the LOU and Union Gas specified construction practices was dependent on a cooperative effort with the contractor and subcontractors that were capable and committed to fulfilling the project obligations. Compliance with sections of the LOU was observed with the correction of a number of issues associated with topsoil management, soil restoration, tile drainage and wet soil shutdown. In a number of situations, small variances in managing soil that risked damage were attributed to individual operator error or supervision and insufficient oversight of qualified specialists with soil and agricultural experience.

The required environmental completion dates and pipeline in-service deadline late in the fall increased the risk of soil damage when conditions were wet. Proper restoration of easement lands was therefore not possible with the length of the construction season well into the fall. The clean-up phase was incomplete the year of construction on 14 agricultural properties though rock picking of subsoil and topsoil replacement was completed for all properties. Proper decompaction of subsoil remained incomplete for several properties the year following construction though surface soils were restored for these properties. Management of drainage tiling activities was a concern throughout the project from how the plans were developed, the plans delay, the interception of tiles, the tile installation in wet soil conditions, the pipeline strike of June by the drainage consultant, the repair of missing tile mains the year after construction, the completion in October by a second drainage consultant and the subsequent working of soils over the tile trench soon after.

Wet soil shutdown was seldom declared as a full shut down, as activities off the soil easement were permitted. Declaring a partial shutdown often required on site interpretation and recognition of what constitutes an adverse effect that was inconsistent between field personnel and insufficient to stop potentially damaging activities. Upon occasion, work continued when environmental permit or in-service deadlines needed to be met when mitigation measures developed on a site specific basis were not always sufficient. Traffic by rubber tired vehicles was occasionally carried out on the easement throughout the project during wet weather conditions with or without required construction needs though the extent of rutting was typically low as soils became packed firm from heavy traffic and moisture infiltration was low. Avoiding standing water needed to be reinforced.

Monitoring the impact of pipeline construction on the land largely considered the impact to soil, the landowner's most valuable resource. Significant disturbance of soil by the construction of a pipeline cannot be avoided. Disturbance should be minimized and the extent of construction practices that

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

impact a soil's function to support plant growth will influence the length of time that soil can return to its previous state and productivity potential. Observations by the ICM of the pipeline construction practices and soil related activities were examined in the Discussion section that were the basis of a number of recommended practices to be introduced or reinforced. These identified observations recognize the needs of landowners and the Union Gas construction process.

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

2. Introduction

Union Gas Limited (Union) and the Ontario Energy Board (OEB) arrived at a Settlement Agreement within the Decision and Order EB-2014-0261, that included the construction of approximately 20km of NPS 48 pipeline (48 inch diameter) in an existing pipeline corridor extending from the Hamilton Valve Site to the Milton Valve Site to be in-service by November 2016 (Ontario Energy Board 2016).

The Settlement Agreement considered issues raised by stakeholders including the Gas Pipeline Landowners of Ontario (GAPLO) pertaining to the project. Based on written and verbal arguments to the OEB from GAPLO (GAPLO 2015), Union Gas agreed to the appointment of an independent construction monitor (ICM) for construction on agricultural lands for the Hamilton-Milton pipeline. The construction monitor was chosen by a committee consisting of one representative from each of Union Gas, the OEB and GAPLO, referred to as the Construction Monitor Committee. Committee members were Rob Marson (Union Gas), Ian Goudy (GAPLO) and Zora Crnojacki (OEB).

Included in the Settlement Agreement was a Letter of Understanding (LOU) that was used to negotiate agreements between Union Gas and the landowner of each of the affected properties. The LOU outlines the obligations with respect to: i) the construction of the pipeline; ii) remediation of the landowner's property; and iii) compensation to the landowner for various damages as a result of the construction of the pipeline. The Decision and Order also contained Conditions of Approval from the OEB stating the requirements that Union Gas were to comply with such as communications and reporting for the construction of the NPS 48 Hamilton to Milton pipeline.

2.1 Scope of Work of Construction Monitor

The scope of work for the construction monitor as listed in the Settlement Agreement was:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union;
3. To review all specific construction commitments included in Union's construction contract;
4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

The construction monitor, working independently, was accountable to the Construction Monitor Committee. However, the function of the monitor as outlined in the Union Gas Construction Monitor Role Description (Union Gas 2016) was to be present on the work site to observe and report on pipeline construction activities that may impact the land, including right-of-way (RoW) preparation, clean-up operations and Wet Soil Shutdown (WSS) events.

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

3. Methods

3.1 Construction Monitor Team

The construction monitor role was met by The Soil Resource Group using a team of three qualified soil science professionals, each with over 25 years of experience working with agricultural soils in Ontario. Equally shared deployment and reporting throughout the construction period by the three ICM's was led by Don King, MSc, CCA-ON (President at The Soil Resource Group) along with Eric Wilson, BSc (retired OMAFRA pedologist) and David Hodgson, BSc (President at DBH Soil Services).

3.2 Communication

Communication amongst the ICM team included recording field notes daily and taking pictures daily of construction activities before forwarding a report to the Monitor Lead. Additional communication by phone or digital messages updated each of the team members on the status of construction progress and urgent issues as they arose.

Communication with Union staff was initiated daily with a Construction Meeting with inspectors at 6am held at the Union Gas project site trailer office that outlined the daily work activities and safety issues. Weekly Construction Meetings were held for the project team at the project site office that invited the Monitor to attend for project updates. The ICM in its stated role was limited in contact with landowners to situations where a specific request was made by a landowner or the Construction Monitor Committee. Communication with the Committee was channeled through the Monitor Lead primarily through written weekly monitoring reports as well as conference call and email correspondence to discuss issues of concern and clarification.

3.3 On-Site Monitoring

The ICM was on-site throughout the construction period when activities included or may have included agricultural lands. The Monitor followed the Letter of Understanding (LOU). They did not exercise any authority to decide when Wet Soil Shutdown was required. The Monitor was not requested by an authorized representative of the Committee to render an opinion of whether or not construction work took place in wet soil conditions as defined in the LOU. The construction specifications, alignment drawings, environmental construction plan, preconstruction meeting survey, were referred to in assessing the impact on agricultural lands as they related to the LOU.

3.4 Reporting

Template spreadsheet report forms issued from Union Gas were completed on a daily basis and weekly basis. Observations of daily activities, soil conditions and related comments or concerns were summarized by the daily ICM and forwarded by email to the Monitor Lead for review who then

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

forwarded them to the Construction Superintendent. Weekly reports were completed by the Monitor Lead that summarized the daily reports for the week and submitted them by email simultaneously to the three members of the Committee. The documents submitted were not reviewed or edited by Union Gas staff or the Committee prior to submission.

4. Results

4.1 Communications with the Committee and Landowners

Communication with the Committee included the submission of weekly reports by the ICM Lead that summarized the ICM daily report for each week. Comments were not received by the OEB representative though points of clarification were discussed over the phone occasionally with the Union Gas and GAPLO Committee members separately. Construction issues that were discussed included topsoil stripping method, wet soil shutdown criteria, construction monitor role, soil inspector role, stone picking sufficiency, site specific soil erosion protection.

A conference call with the Committee members July 27, 2016 provided the opportunity to discuss observations to date from the ICM team using a shared PowerPoint presentation. In reviewing the LOU, specific construction concerns related to agricultural properties were highlighted. Topsoil stripping and tile drainage were topics of particular concern. The general experience of the Monitor regarding its fit and tepid acceptance of the role by the construction team was discussed. Other soil management concerns were identified though the importance of working with the construction team to further reduce risk of soil damage was recognized by the ICM team as an ongoing process. A request was made by the OEB to ensure documentation had been forwarded describing the extent and impact of topsoil stripping activities prior to the deployment of the ICM by Union Gas.

Communications between the ICM team and landowners were minimal as the Land Relations Agent (LRA) was designated as the point of contact for the project. The ICM team did not receive a request by a landowner or the Construction Monitor Committee to address a landowner specific enquiry. On-site visits by landowners with the ICM being present were limited to very few occurrences and most often did not require any construction related explanation or comment by the ICM. The lack of contact may be in part due to the small number of full-time agricultural landowners, the communication with and availability of the Union Gas LRA to inform and discuss issues, or whether landowners were made aware of the ICM position as being available to contact as an additional resource as part of the on-site construction team.

The communication procedure for any discussion between the ICM and landowners during the clean-up phase the year after construction was outlined by the Union Gas construction superintendent in position for 2017. Communication with landowners was to be through the LRA as the point of contact. Discussions of clean-up plans to address problems with the agricultural lands were to be reviewed

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

between Union Gas, the inspector and the monitor. Discussion with landowners was asked to include the LRA or inspector to maintain an informed line of communication.

4.2 On-Site Monitoring

The involvement of the ICM on the project began with the tree clearing activities from February to March 2016, reported earlier. The ICM began on-site monitoring of the summer construction work May 30, 2016 that continued until the 2016 activities on agricultural lands ended December 8, 2016. Monitoring of the restoration work continued the year after construction from June 5 until November 10, 2017. The ICM followed the LOU and did not exercise any authority to decide when Wet Soil Shutdown was required though observations of unsuitable conditions were actively discussed with field staff and the Construction Superintendent when necessary.

4.3 Reporting

Activities on 30 agricultural properties were monitored by the ICM. Observations for the construction project including restoration the year after construction were recorded in 214 daily reports and further summarized in 40 weekly report submissions using the Union Gas template provided. Digital picture records (>2500) with date, time and location taken over the duration of the project have been stored electronically.

4.3.1 LOU Compliance of Construction Activities

In monitoring the project construction activities on agricultural lands, results of their direct compliance with the related sections of the LOU have been summarized. Further observation and recommended improvements to the construction practices are included in the Discussion.

Sec.1. Pre-Construction Meeting

Compliant: Preconstruction interviews using a 'Pre-Construction Meeting' form were undertaken by the Land Relations Agent and the Construction Superintendent between February and June 2016 to discuss and record site specific issues such as need for access across easement and implementation of mitigation and rehabilitation measures. A copy of the completed interview form was made available to the landowner and the ICM. Of note was the question included asking whether landowners wanted topsoil stripping done, which should not be a consideration. The matter of having mulch placed under the topsoil pile would be a reasonable consideration but was not asked.

Sec.2. Testing for Soybean Cyst Nematode

Compliant: All agricultural easements along the pipeline route were sampled before construction by a soil specialist with Stantec. The ICM was informed that no properties tested positive for Soybean Cyst Nematode (SCN). Topsoil imported to the easement lands after construction during clean-up was tested by Stantec for SCN and was reportedly negative. A copy of the test results were not known to be forwarded to the landowners that received topsoil and were not forwarded to the ICM.

Sec.3. Continued Supply of Services

Union Gas Limited NPS 48 Hamilton Milton Pipeline Project

Compliant: Maintenance of services was undertaken by the contractor and Union Gas.

Sec.4. Water Wells

Compliant: Monitoring the quality and quantity of well water was undertaken by the environmental personnel. One impacted landowner received a supply of potable water until their shallow water well was restored after construction.

Sec.5. Staking of Work Space

Compliant: The outside boundary of the easement and temporary land use area of the project workspace was marked using painted wooden stakes with chainage marked at intervals of 30m or less prior to construction and remained until after topsoil was stripped. Work activities did not exceed the easement boundary though small areas of soil piling extended beyond the boundary.

Sec.6. Topsoil Stripping

Partially Compliant: Prior to installing the pipeline in agricultural areas, topsoil was stripped across the entire width of the easement of all agricultural properties as well as across wider temporary land use areas. All topsoil stripped was piled together in one pile on topsoil in the storage TLU adjacent to the easement and temporary land use areas. The topsoil and subsoil was piled separately, with the rare occurrence that required correction. Due diligence to ensure that topsoil and subsoil were not mixed was implemented including the use of physical barriers when necessary. Maintaining 1m of separation was seldom done along the easement due to space constraints. Topsoil was not overwintered as it was not requested to be by any agricultural property landowners and was returned after construction with the intention that the easement lands were consistent with the surrounding grade. Stripping of topsoil occurred under generally favourable conditions. Determining topsoil depth was occasionally misread by individual operators adding subsoil when stripping. The environmental inspector that was not a soil specialist was often not present during topsoil stripping.

Sec.7. Depth of Cover

Compliant: The pipeline was installed with a minimum of 1.2m of cover that was ensured with the continuous monitoring of the trench depth manually and subsequently by GPS as it was being dug to allow for adequate soil cover of the pipeline.

Sec.8. Leveling of Pipe Trench

Compliant: During trench backfilling, the excess material was piled on the easement until removal during the year of construction. Landowners indicated in the preconstruction interview if they wanted excess soil. It is unknown whether landowners were always given the right of first refusal of any excess material before it was removed. The LRA was not always made aware of the movement of excess material to inform landowners. Topsoil was returned in the fall site by site after construction (September 2 to November 18). A small number of properties the year following had grade differences of greater than 4 inches that was related to trench subsidence as well as rutting from late season tiling. The settlement and uneven easement was repaired by removing topsoil and filling it in with imported topsoil and the stripped topsoil. Mounding over the trench line persisted the year following construction over 4 inches on some properties but was not reported to be necessary to remove by the landowners. Properties with fall tile installation were leveled with regrading. A restriction of the natural surface flow of water was most pronounced in one property that caused a wet area. The area was mitigated by stripping topsoil, removing excess subsoil and replacing the stripped topsoil.

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Sec.9. Topsoil Replacement, Compaction Removal and Stone Picking

Partially Compliant: Prior to topsoil replacement, subsoil decompaction was undertaken in varied conditions and was not completed for all properties. Decompaction using a ripper, chisel plow and disc implements during dry summer conditions at times overworked and damaged the subsoil surface. Deep tillage was done on small areas of some properties when conditions remained unsuitably wet and where ponded water was not pumped off. Decompaction of the subsoil was incomplete on 14 agricultural properties by late fall when conditions were too wet or too stony to be effective. Many landowners were not made aware or presumably uninterested in the type of subsoiling implement used. Stones were picked from the subsoil by mechanical stone picker when dry and by hand to a size not less than 100mm in diameter. A small number of properties had very stony and bouldery subsoil that were not completely picked clean but were extensively picked and left with a level surface. Topsoil was returned for all properties the year of construction under generally favourable conditions using backhoes and bulldozers to grade. Decompaction and fine leveling of the topsoil used subsoiler, disc, cultivator and cultipacker implements favoured by the contractor though soil moisture conditions were not always suitably dry to use the cultipacker. Stones were picked from the topsoil by mechanical stone picker when dry and by hand to a size not less than 100mm in diameter, though two very stony easement fields were picked to a reasonable comparison to the adjacent fields. The clean-up inspector, not a soil specialist, tested for compaction and topsoil depths for each property. Compaction testing was done on and off easement before and after topsoil replacement though the results were not requested by the landowners or provided to the ICM. A penetrometer was used the year of construction and a hand auger the next year when conditions were dry and penetrometer results were inconclusive. Topsoil depth was nominally checked during replacement and was not adjusted based on any topsoil depth measurement. Those properties that did not have subsoil decompaction and topsoil decompaction completed the year of construction were partially addressed the following year. Some landowners accepted compensation instead due to crop production wishes or due to the inspectors concerns of stoniness though subsoil compaction remained unresolved. Topsoil damage or loss overwinter was exacerbated from incomplete subsoil and topsoil restoration, erosion protection measures or missing drainage tiling.

Sec.10. Drainage Tiling

Partially Compliant: Repairs and restoration of field drainage systems and municipal drains impacted by construction were completed by a qualified independent drainage consultant the year of construction (December) and the year after construction (October). The drainage consultant did not work directly with each landowner prior to or during construction to determine whether there was pre-construction, post construction and/or temporary tile construction required on their land. There was no pre-construction tile work. A tile plan for each landowner was developed during construction from consultation between the landowner and Union Gas who subcontracted an engineering drainage firm to document the drainage system information known prior to construction. Tile crossings that were intercepted during construction were staked, but not capped or always georeferenced by the contractor. Tile mains were therefore not temporarily repaired across the trench line by a drainage consultant as in the LOU. Other areas of drainage needs such as a temporary tile plan to receive accumulated surface water, or tile for new cleared land were not required. Existing tile lines were not used to pump accumulated water into as a result of the construction. Tiling work was initiated the year of construction

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in December under moist to wet soil conditions. Tiling was completed the year after construction as requested by other landowner/operators. This was initiated in late June; however, a pipeline strike by the drainage consultant forced a delay and a replacement consultant completed the tile work in October 2017.

Sec.11 Water Accumulation during Construction

Compliant: Where water accumulated on or off the easement after rainfall as a result of the construction, it was pumped to suitable areas as directed by the environmental inspectors. Water was filtered to reduce the release of sediment when pumped onto agricultural lands.

Sec.12 Access Across the Trench

Compliant: Access across the easement was maintained for each property field without restriction where requested by the landowner. Site conditions and landowner situations did not require creating a gravel base on filter fabric across the trench line as outlined in the LOU.

Sec.13 Restoration of Woodlots

Compliant: tree clearing was undertaken prior to construction (February to March) to remove all trees, stumps and brush from the easement. No land was known to be converted from woodlot to agricultural land after construction. The required 6m minimum strip over the pipeline was to be maintained contrary to the request of one orchard grower.

Sec.14 Tree Replacement

Compliant: arrangements to replace trees that were cleared from the easement were made in consultation with the landowners.

Sec.15. Covenants

Covenants of Union Gas listed in the LOU were or will be presumably Compliant with the exception of the following covenants that were Partially Compliant:

- i) Survey techniques (GPS) to establish pre-construction and post-construction soil grades were not generally utilized as soils were restored from visual reliance of experienced operators and personnel. Few areas of restoration or grading problems were surveyed.
- iii) Travel on the easement was primarily done in the work area and driving lane for practical reasons, not on the trench line, for much of the construction period from welding of the pipe prior to trenching until after backfilling was completed. Traffic areas on subsoil before and after this period were inconsistent and not confined to the trench line.
- xiii) Passage and land access for agricultural equipment was provided when conditions were suitable during construction; however, the fragile state of the restored and reconfigured soils often becomes unsuitable when wet up in the late fall the year of construction until soils dry out the year following construction. Landowners that required access onto the easement during this time experienced severe rutting in spots. Construction mats across the easement were provided to one orchard operator in the spring after discussion of the poor spring conditions.
- xvii) Weed control along the pipeline easement was not recognized as a concern by agricultural landowners or Union Gas the year of construction. No known attempts were made to spray or cut weeds on topsoil piles or the weeds that grew to maturity on gored lands. Weed

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- growth became well established on the easement the year after construction prior to any restoration. Weeds were baled off from two large properties as requested by the landowner/operator.
- xx) Imported topsoil was required on the easement the year after construction during clean-up to repair subsidence and topsoil erosion. Two sources of topsoil were evaluated by a soil specialist with Stantec and one source reportedly had attributes consistent with an agricultural soil and was free of SCN and met MOE Table 1 background soil standards. The moderately coarse texture of the topsoil matched well with some adjacent easement soils but was not consistent for the range of surface soil textures from clay loam to sandy loam found on other properties. Information of whether each landowner had input or knowledge of the quality or the source of imported topsoil was not provided but indications were this did not occur.
 - xxi) The wet soils shutdown practice for pipeline construction on agricultural lands (LOU Schedule 6) was implemented several times by the Construction Superintendent in consultation with Union Gas environmental inspectors in directing either a partial shutdown or complete shutdown. Construction restrictions were imposed on the contractor when an adverse effect on soils due to wet soil conditions was likely to occur; however, recognition of what constitutes an adverse effect was inconsistent between field personnel and insufficient to stop potentially damaging activities. Mitigation measures developed on a site specific basis were not always sufficient. Traffic by rubber tired vehicles was occasionally carried out on the easement throughout the project during wet weather conditions with or without required construction needs.

The remaining sections in the LOU cover dispute resolution, landowner rights and compensation that were not in the scope of activity for the monitor.

5. Discussion

Monitoring the impact of pipeline construction on the land largely considered the integrity of the soil in all its profile horizons as being of paramount importance to maintain proper soil function. Soil having formed over thousands of years once lifted, mixed, compacted and reconsolidated will be disturbed and damaged for a considerable amount of time. The nature of the construction process cannot prevent a degree of this change from happening in an agricultural soil. The soils ability to function as a favourable medium for plants with sufficient porosity to allow nutrient, water and air exchange throughout the rooting zone extends beyond the A horizon. Disturbance of soil by construction should be minimized firstly, and secondly construction practices that impact soil function in the subsoil and topsoil will influence the length of time that soil can return to its previous state and productivity potential.

Monitoring of the construction practices and related activities by the ICM are grouped for discussion as they presented themselves during the project. A number of related concerns and improvements were

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identified based on observations to protect a soils function during the construction process in recognizing the needs of landowners and Union Gas.

5.1 Soil Testing

Soil sampling for compaction was done for on easement and off easement using a penetrometer by the Union Gas soil inspector. Random checking by monitor confirmed compaction results that were mostly acceptable as being better than off easement. Areas of compaction were observed under the topsoil storage TLU. Soil depth sampling was not readily observed in any systematic approach. An even cover of topsoil that was typically more than 15cm was returned with experienced operators that matched contour and grade across the easement to match the subsoil grade.

Based on observations, the following are recommended guidelines:

- a. Soil sampling and assessment (SCN, soil profile characterization eg. depth, preexisting mixing) across easement to be conducted by a **qualified** soil specialist pre construction for each property ensuring biosecurity protocols
- b. The soil assessment results to be forwarded to the **landowner and ICM** upon completion

5.2 Biosecurity

Biosecurity consideration of the SCN insect pest was addressed with soil sampling of agricultural properties preconstruction by soil specialists from Stantec that determined no properties reportedly tested positive. Imported topsoil was also reportedly negative. Biosecurity is an important consideration not only for SCN but other pests including resistant weed seeds in minimizing the transport of topsoil eg. truck, boots, machines, between any property. The presence of giant hogweed in the area of SC26, that was removed, illustrated the risk of transport of harmful organisms to properties or people. Topsoil moved between properties on equipment when stripping should be better managed to clean bulldozer blades or backhoe buckets to reduce the risk.

Based on these observations, the following are recommended guidelines:

- a. Soil sample analysis to include SCN testing pre construction, and if SCN confirmed, **testing SCN post construction** on all non SCN tested properties
- b. Establish an overall **pest protocol** that considers SCN and other pests including resistant weed seeds in minimizing the transport of topsoil between any property

5.3 Topsoil Stripping

Agricultural production relies on the preservation of the topsoil distinct in characteristic from the subsoil layers below. Careful topsoil removal and handling from the 30 agricultural properties was given considerable attention for the construction project. Several pieces of heavy equipment were employed to strip topsoil that included road grader, bulldozer and backhoe machines. Topsoil was stripped the full 28m width of the easement up to the 10m topsoil storage TLU typically located along the southern edge

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away from the work area (see Pipeline cross section schematic). Additional topsoil stripping was done at wider TLU areas at road and stream crossings and staging areas and piled separately.

A systematic approach to topsoil stripping the fields was generally followed after a disc of the surface by a tractor with a cut along the easement boundary on the work side by the most experienced grader operator. After incremental passes, the topsoil depth was visually established by the grader operator over a couple widths before D6 and D8 bulldozers would continue to scrape and push layers of topsoil into a single pile. Areas at corners of a TLU or close to stream crossings were stripped by backhoes using ditch buckets.

The suitability of conditions was assessed each day prior to topsoil stripping by an environmental inspector. Contractor operators and foreman appeared experienced in visually identifying the interface between A and B soil horizons though the large variability in soil type along the easement altered the visual indicators. Without a qualified soils inspector to monitor, or any inspector much of the time, removing topsoil to the appropriate depth was left to each of the several operators to carry out, occasionally with different results. The ICM was requested by operators to provide guidance when uncertain. Information of the measured topsoil depth for a field had not been collected ahead of stripping to assist the operators. Soil assessments conducted by the ICM confirmed the soils in the area of the new pipeline were undisturbed from construction and those in the area of previous construction were generally disturbed with C material subsoil, if not in the topsoil, in the underlying subsoil. The final stripping across the easement was carried out most uniformly by a grader and occasionally by a bulldozer that scraped much of the remaining topsoil in the A/B horizon transition layer into a small windrow positioned at the base of the topsoil pile.

Based on topsoil stripping observations, the following are recommended guidelines:

- a. Agricultural land topsoil stripping to be done with a qualified Soil Inspector and Independent Construction Monitor (ICM) **present**
- b. Topsoil stripping depth to be identified by an operator using commonly accepted visual criteria of 50/50 of topsoil/subsoil materials to be monitored by ICM and Soil Inspector; Soil Inspector to direct operator and **record variances in depth by property**
- c. Topsoil stripping to be **separated** into areas of previously disturbed soil (eg. mixing from previous construction) and undisturbed (native) soil piles off easement
- d. Topsoil stripping equipment to be initially done by **grader in undisturbed soil** area, then by D6 bulldozer in disturbed soil area; by **backhoe in moist areas** near water crossings
- e. After topsoil stripping, the **transition layer** of the remaining topsoil and intruded subsoil to be removed using **grader only**
- f. **Record using GPS georeference** the preconstruction grade of topsoil and the grade of subsoil after topsoil stripping; comparison can then be made to the reestablished subsoil and topsoil grade post construction, to help verify uniform topsoil depth and help ensure no restriction of the overland flow of water

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Note: The OEB Environmental Guidelines suggest 'The topsoil depth and method of stripping should be determined after consultation with the landowner prior to construction.'



May 30 - HM13 topsoil A horizon (darker) and B horizon (reddish) stripped together



August 15 - HM36 grader initiates topsoil stripping to determine proper depth



June 20 - HM39 topsoil stripping being completed by multiple operators



August 15 - HM36 topsoil piles of darker (back) and lighter colour from different stripping depths

5.4 Soil Piling

Topsoil piles were stored within the designated topsoil storage TLU relying on the wooden stakes that marked the easement boundary. In preparing fields for topsoil stripping, discing often encroached the 10m TLU topsoil pile area. When the pile topsoil was removed, there may have been an additional risk of an operator not distinguishing the loose material of the pile from the loosened topsoil surface underneath and removing a shallow depth of original topsoil. Mulch was not spread on the surface under the topsoil piles to provide a visual indicator for when removing the topsoil pile. Mulch may be a preferable assurance to landowners; however, experienced operators were adept at removing the piled topsoil from a firm undisturbed soil surface negating the need for a mulch layer.

Topsoil stripped across the full easement was piled in the topsoil storage TLU. Depending on the depth of topsoil removed, the larger sized piles would infrequently exceed the easement boundary. The suggestion of separating topsoil in the area of previous construction into one TLU storage pile with the undisturbed topsoil piled in another topsoil TLU pile would reduce the risk of encroachment of one large pile into the adjacent fields or an adjacent subsoil pile due to the confined space of the easement.

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Separation of the excavated subsoil pile from the topsoil transition layer pile was found to be difficult along the easement due to the volume of soil and the confined work area. A 1m separation was not maintained until ditching was done in the wider TLU areas. Encroachment initially onto the transition pile was corrected with the use of geotextile fabric as a separation measure where the size of piles warranted it. This practice was used when wet material from the deep trench could not be piled properly. Large subsoil piles created in water crossing areas did infrequently escape beyond the easement boundary but were typically moved back by crews when inspections of the backside of piles were done.

Topsoil preservation of the piles was a concern during construction, a period that could last several weeks between stripping and replacement. During the hot dry period of the summer, wind erosion and dust control was a concern amongst residents close to the easement. In addition to spraying water on the easement, a mulch-based tackifier material was sprayed on topsoil piles to provide a thin crust to reduce wind erosion from the piles. It appeared that the tackifier, in these few limited locations, also provided some help in reducing water erosion from the piles. Piles were often steep in shape to fit within the easement TLU storage area or very large in the wider TLU staging areas that did pose additional risk of soil loss from the piles and possible mixing. The transition layer pile at the base of the topsoil pile acted as a containment for topsoil erosion preventing the movement and mixing of topsoil into the adjacent subsoil material. Topsoil piles were not protected from weed growth as a proliferation of weed seeds went unchecked. The weeds did provide in many cases an effective erosion protection measure. Based on observations of soil piling, the following are recommended guidelines:

- a. Avoid tilling topsoil **under topsoil pile storage area** to reduce soil compaction and leave a visual indicator for topsoil pile removal
- b. Separate topsoil from disturbed and undisturbed areas into two piles on **additional Temporary Land Use areas** on either side of easement to reduce work constraints and soil mixing; include separate A/B transition layer soil piles on both sides
- c. Maintain **separation of topsoil by property** during stripping and separation of topsoil piles by property using a break in the windrow at property boundary
- d. Protect topsoil piles from wind and water erosion on prone soil textures with the application of a **spray tackifier**
- e. Maintain **weed control** on piles using herbicide spray to avoid seed set, if requested



June 2 - HM33 topsoil disced under pile area to the right of the yellow stakes marking existing pipeline



June 6 - HM14 topsoil stripped across easement and stored in one pile

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July 18 - HM48 trench subsoil piled on geotextile material separating from transition layer pile



July 29 - HM28 subsoil pile exceeding TLU boundary encroaching into soybean crop



September 12 - HM40 topsoil pile eroded sediment captured by transition layer pile



July 18 - HM22 topsoil pile densely covered with mature weed growth

5.5 Trenching

Trenching for the pipeline was undertaken by backhoes that excavated subsoil material to a consistent predetermined depth. Each machine operator had an assigned crew member that regularly monitored the required depth along the easement by suspending a vertical tape measure. The depth of the pipeline and therefore the depth of cover were predetermined to be greater than 1.2m. The length of mainline open trench was usually limited to the distance between road crossings or stream crossings and a continuous length of welded pipe. However, at one point a long stretch of open trench was opened up at the east end of agricultural properties from Tremaine Road to west of Bell School Line waiting to be backfilled. Lowering-in and backfilling typically followed soon after trenching with weather permitting.

When trenching, storing the subsoil material in a pile was often a challenge to maintain separation with the topsoil pile. In a few notable situations where the depth or the width of the trench needed to be increased or the nature of the material could no longer be added to the pile, the additional trench subsoil was either directly loaded onto a dump truck for relocation or removal, or dumped on to the driveway. Using the driveway as a temporary storage area was a concern as the driveway was situated on the side of the easement where subsoil had not been previously disturbed. The addition of trench C horizon soil onto areas of undisturbed B horizon soil risks further mixing of poor and better quality subsoil to potentially impact soil fertility and future crop growth.

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Trenching did interrupt drainage tile crossing the easement on some of the agricultural properties but was not largely observed until HM39. Several pieces of a tile running parallel to the trench were severed and mixed into the subsoil pile that was largely not cleaned up before being later backfilled.

Based on observations of subsoil trenching, the following are recommended guidelines:

- a. Wet subsoil spoil material removed from trench to be contained within a subsoil berm **avoiding contact with A or B horizon soils**
- b. Avoid the piling or grading of **C horizon subsoil onto undisturbed B horizon soil**
- c. Drainage tile intercepted by trenching **should be removed** whenever possible



July 22 - HM40 trenching to proper depth checked regularly by suspended tape measure



July 22 - HM39 deep trench C horizon subsoil mixed with undisturbed B horizon subsoil

5.6 Backfilling

Backfilling of the trench after the pipeline was lowered in was intended to use as much of the excavated subsoil as was reasonably possible. The backfilling was completed in stages of covering or shading the pipe, filling to within a couple feet of the easement surface, compacting the material with machine traffic, and pushing additional subsoil and trafficking over the trench until level. The method was modified somewhat by the soil conditions and type of soil that varied from clay loam stone free material in the east end, to boulder till material in the middle section, to sandy loam stony till material toward the west end. The stone free soils were used directly from the pile and bucketed over the pipe. After that, shaker or roller buckets were used to break up clumped material and remove stones for the shading of the pipe before further backfilling. Sections of large stones and boulders required support blocks under the pipe and imported sand for padding the pipe. Each method influenced the amount of excess material that remained once the trench was backfilled and levelled.

The backfilling method varied as well with the machine used and the extent of compaction applied that did not appear consistent with factors such as soil type or moisture. Whether subsoil was pushed into the trench to grade before driven on with a tracked machine or filled to within 2ft. of grade and driven on by grader tires or loader filled bulldozer, the different amount of compaction applied raises concern for excess compaction as well as potential subsoil subsidence.

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Landowners indicated in the survey of their preference for keeping excess soil material of which roughly half said yes. Spoil piles remained on the easement for an extended period on some properties that did not request it. This became a problem when large standing water ponds were left standing in the same area or decompaction had been completed around the piles increasing the risk of subsoil compaction from truck traffic removing the spoil.

Once backfilling was completed, grading continued to reestablish conditions prior to topsoil return with a level grade that matched from side to side of the easement. There was no mound or provision for trench subsidence with subsoil grading.

Based on observations of trench backfilling, the following are recommended guidelines:

- a. Backfilling of trench soil material **to be monitored** in addition to the initial shading
- b. Removal of an installed physical barrier between soil piles to be done **manually** in assisting backhoe when returning pile material to avoid mixing debris into soil
- c. Compaction of backfilled soil material to be by a method that applies the standard density on a thorough and **consistent** manner in depth and width of the trench



August 22 - HM30 extensive use of imported sand to cover pipe displacing bouldery subsoil



Aug 18-HM39 backfill completed after separating subsoil from pile barrier and grading level

5.7 Drainage Tiling

Tile drainage information was discussed with each landowner for their agricultural property during the landowner survey interview, recognizing that farmers consider tile drainage a high priority. Plans indicating the existing tile were reportedly available from the previous pipeline installation in the corridor 10 years previous. A tile plan for the construction project was not completed prior to construction and did not get finalized until the fall of the year of construction. The limited number of agricultural properties with extensive tile drainage was considered a deterrent to securing a drainage consultant until after construction. During construction, only some of the agricultural properties had tiles severed during trenching that either crossed the trench or were parallel to the edge of the trench. Damaged tiles were marked though they were not capped and tile mains were not always temporarily repaired across the easement until the tiling work was done after construction.

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Tile drainage began in December 2016 by a licensed drainage consultant. By this time, the reconfigured soils had wet up and conditions were soft for vehicle traffic. Tiles were installed on three properties parallel to the easement approximately 6m from either side of the new pipeline with outlets as well as a header tile run on one of the properties to connect several lateral tiles. Compaction and rutting up to 10cm from the tracked tile plow was common and up to 25cm in some saturated low lying areas. Due to the time of year and poor conditions, a landowner/operator of three properties needing tile repairs requested it be done the year after construction.

Tile work resumed June 26, 2017 but was halted the same day when the tile drainage crew struck the outside of a gas pipeline during an excavation. The serious mishap resulted in a change in drainage consultant and procedure that caused a delay until October. Tile installation continued under dry conditions for two weeks in locating existing lateral and main tiles and installing new tile parallel to the easement on four additional properties. Wet spots on easement with poor drainage including damaged tile from trenching, where some landowners had inadvertently caused rutting, were corrected with several blind tile inlets using sand or gravel. Main tiles not temporarily repaired during trenching were connected or replaced. Soil uplifted from the tile plow trench is typically left to reconsolidate naturally overwinter; however, at the request of one landowner, soils were pushed and graded back over the trench. Based on observations of drainage tiling, the following are recommended guidelines:

- a. Prepare a **preconstruction tiling plan** that considers the preconstruction installation of an upslope header tile parallel to the easement
- b. During trenching, any **severed field tile** is to be staked, identified, capped at the downslope end, and location recorded using GPS georeferencing
- c. Where a main tile is intercepted that crosses the easement, **maintain a temporary connection** until permanently repaired to avoid the wetting up of easement soil
- d. Repair of tile should be done upon completion of topsoil restoration in dry conditions to allow further restoration of topsoil and planting of a cover crop; avoid tile installation in **wet conditions** of late fall when damage to topsoil will negate restoration
- e. Soil uplifted from fall tile drainage to be allowed to **reconsolidate naturally overwinter** and not be pushed back onto tile trench risking tile damage

Note: The OEB Environmental Guidelines suggest that for tiled land, ‘...mitigation plans must be developed and implemented prior to construction. The plans should be designed to maintain subsurface drainage during and after pipeline construction.’

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July 20 - HM45 drainage tile intercepted by trenching marked by wooden stakes



December 7 - HM45 tile installation trenches and compaction after completing in wet soil conditions



December 7 - HM44 tile installation trenches and topsoil rutting after completing in wet conditions



October 11 2017 - HM36 tile installation in dry to moist conditions with little compaction



October 11 - HM36 tile main missing across trench line exposed for repair



October 14 - HM40 wet area from damaged tile getting repaired with blind tile inlet

5.8 Wet Soil Shutdown

The wet soil shutdown policy is required during construction to prevent an adverse effect on soils during wet soil conditions. In determining the daily condition of the easement, a network of 5 rain gauges was checked by the Union Gas environmental inspector. After a rainfall, the extent and location of work shutdown was a decision of the Construction Superintendent based in part on the assessment of the environmental inspector and the designated soil inspector during clean-up. Factors considered in determining the extent of a shutdown ie. full or partial shutdown, were the varied conditions throughout the easement (eg. rainfall, soil type) and different construction requirements. Few full wet soil shutdown days were declared over the construction phase for agricultural lands. Inspection and monitoring of easement conditions for partial shutdowns became a responsibility of the team of inspectors on site throughout the day for the large number of work locations. Suitable conditions were also an interpretation of experienced contractor foremen, which managed contractor staff and subcontractor traffic onto the easement.

A number of incidents were observed by the ICM, despite the general acceptance of the wet soil shutdown policy, where wet subsoils of the easement were trafficked and compaction was at risk. Pickup traffic was often seen in areas of wet soil though the extent of rutting was typically low as soils became packed firm from heavy traffic and moisture infiltration was low.

Avoiding standing water was generally accepted though isolated areas of ponding were encroached including when stream crossing activities were considered a priority. Subcontractor traffic (eg. dump trucks, hydro-vac, fuel truck) would occasionally not comply with the wet soil shutdown policy. Non-compliance with the wet soil shutdown policy occurred most often close to environmental permit deadlines ie. water crossings, and activities later in the fall leading up to the pipeline in-service deadline date. Mitigation measures when continuing with necessary construction activities on agricultural lands could have been improved with the use of construction mats in areas of wet soil conditions and greater restriction of vehicle traffic. Weather forecast information including radar that was available in real time was not always consulted by inspectors and contractor to be aware of pending significant rainfall. Upon occasion, heavy equipment still on the easement when rain arrived would have to be driven to the road access over soils that had become saturated.

Further mitigation of wet soil damage can be improved with the diligent removal of ponded water created on the easement from rainfall. Areas of subsoil that were left with ponded water for several days, particularly on clay soils, increased the risk of water infiltrating into the soil profile and lengthening the time before areas could be safely driven on or restored without causing further compaction. Low areas of a property that are predictable areas of ponding based on topography should be identified prior to construction and be discussed with each landowner to locate suitable areas off easement to pump excess water to.

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Working of saturated soils by equipment was occasionally done when conditions were wet at the surface of the work area. Bulldozers were often seen scraping or blading a thin layer of wet subsoil mixing with drier material directly beneath to hasten the easement subsoil drying. By not allowing the soil to dry naturally, the natural structure and drainage capability are affected by the destructive forces causing the detachment of particles that seal pores, compact the subsoil, and reduce water infiltration. Based on observations of wet soil shutdown, the following are recommended guidelines:

- a. Rainfall monitoring network data to be distributed by Environmental Inspector to staff **and ICM** prior to the daily construction meeting
- b. Determining wet soil shutdown conditions prior to daily construction by Construction Superintendent to consider input from Environmental Inspector, **qualified Soil Inspector and ICM**
- c. Traffic, including pickup traffic, on easement throughout wet soil conditions to be avoided and restricted to **required** construction areas
- d. Prioritizing pipe work during wet soil shutdown conditions should **implement management practices** (eg. construction mats) to minimize soil damage to a small area that should be recorded using GPS georeferencing
- e. Awareness of impending rainfall is a responsibility of contractor to return heavy equipment to road access **prior to soil wet up** and possible compaction damage
- f. Raise awareness of wet soil shutdown and risk of damage of wet soils by Union Gas and Contractor **to Subcontractors**
- g. Water pumping locations for removing ponding on easement to be established with each landowner **prior to construction**
- h. Pumping ponded water off easement should be a **high priority** to avoid causing saturated soil conditions that may lead to lengthy dry down time and additional soil compaction risk
- i. Drying of easement subsoils not to be aided by scraping or blading of wet soil layer, of which removing wet layer should only be done if there are **required** construction areas to access

Note: The OEB Environmental Guidelines suggest that the wet weather shut down policy is to include 'During wet weather conditions, contact with topsoil should be avoided and a total restriction placed on all rubber tired vehicles and equipment traveling on the ROW. If, due to delays, construction must continue under wet soil conditions to meet an in-service date, terms and conditions must be discussed with the landowner.'

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July 14 - HM44 pickup traffic on easement during wet soil shutdown



August 18 - HM39 tracks from some traffic on easement not avoiding wet soil



August 26 - HM31 heavy equipment driving through standing water for water crossing work



August 27 - HM44 bulldozer blading fully saturated soil to aid drying



September 8 - HM38 traffic continued in wet soil conditions for water crossing activity



September 8 - HM45 wet soil shutdown from wet soil and standing water on driveway subsoil



October 24 - HM30 truck tracks on wet subsoil from hauling extraneous material off easement



November 2 - HM38 topsoil being returned onto wet subsoil prior to subsoil decompaction

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5.9 Topsoil Replacement, Compaction Removal and Stone Picking

5.9.1 Year of Construction Restoration

The soil restoration process, or the clean-up phase, began at the end of August west of Tremaine Road for agricultural properties after just over half of the pipeline installation, backfilling and grading of the subsoil was completed. Clean-up continued through the completion of construction by around mid November. Conditions were unsuitable to complete decompaction at a number of properties, though topsoil was returned for all properties. The unfinished restoration practices were addressed in the year following construction from early June to November 2017. The Master Construction Schedule identified the clean-up period to be completed between August 5 and October 29, 2016.

An inspector hired to oversee the soil clean-up in 2016 and 2017 worked with the contractor to ensure the steps of subsoil decompaction, stone picking and topsoil replacement were completed under suitable conditions. For those properties where decompaction of subsoil had not been completed, indications at the end of the construction year were provided to landowners that compaction would be addressed the next year with the use of a subsoiler to decompact below the topsoil layer. Instead, compensation was accepted for some properties due to crop production wishes or due to the clean-up inspectors concerns of stoniness and potential mixing of layers leaving subsoil compaction unmitigated.

Throughout the clean-up effort, the methods and soil conditions were generally suitable to meet the conditions of the LOU that would not adversely affect soils. However, a number of inconsistencies were observed that increased the risk of a soils function and productivity being affected when compared to preconstruction conditions.

- Subsoil decompaction was not initially done in two directions but became standardized to include a pass parallel to the easement and another close to a perpendicular pass using a deep tillage implement that lifts and fractures the soil **in dry conditions**
- **Ponding areas left too long** before water was pumped off were wet when a deep tillage ripper was used to aerate that caused smeared surfaces and further compaction; need to leave alone to allow surface to dry and then use a light chisel implement and allow for further drying
- Subsequent tilling and leveling of dry subsoils was often **excessive** breaking its structure to powder prior to stone picking (eg. one property had 14 passes of equipment) that will subsequently cause sealing and drainage restrictions
- Decompacting subsoil for a number of properties ahead of topsoil restoration caused extended periods of wet soil shutdown particularly on clay subsoils; the time between initiating the decompaction steps and the time to topsoil restoration for a property **should be limited** to avoid the risk of a deeper wetting up of the subsoil
- Subsoil spoil piles were left in places of the easement for **several weeks** that, with the wetting up of the fall period, became a greater risk for compaction of the easement when removed; the request of landowners for any intended use was in doubt as the LRA was not always kept informed of the movement of extraneous piles

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- Stone picking of soils by machine was preferred which increased the number of tillage passes necessary beforehand to improve the picking efficiency, which resulted in damage to the soil structure; when conditions were not dry, an amount of soil clods were also collected and removed; a greater **emphasis on hand picking** should be used to remove rocks of all sizes
- Stone picking should consider the **inherent stoniness** of a field with the goal of removing 5cm diameter and larger stones in non-stony soils and 10cm diameter and larger in stony soils
- Grading of a topsoil crown over the trenchline should be **optional for a landowner** as it would consider farmer and surface drainage needs as well as reduce the risk of further compaction of topsoil from the use of the grader blade in creating the crown
- Traffic to be **avoided on all topsoil** once decompaction is completed other than seeding; topsoil was pulled part way across easement leaving a driveway on subsoil though vehicles were allowed to use the topsoil which should not be permitted.
- Debris clean-up **should be ongoing** including removal of damaged tile from excavated subsoil to avoid adding debris to the trench during backfilling
- Method of cover crop seeding to be by seed drill at a provincially recommended medium to heavy rate using a cover crop type tailored to the landowner, timing of fall seeding, soil type and conditions, in a **cross slope** direction where sloping
- Site specific erosion control measures need to be anticipated **prior to clean-up** and modified if necessary based on the timing and site conditions eg. insufficient decompaction
- Completion of the steps of soil restoration should be done with utmost efficiency and effort **by mid October** (Master Construction Schedule - October 29) to allow for sufficient cover crop establishment to avoid a greater risk of topsoil erosion overwinter and early spring

Note: The OEB Environmental Guidelines suggest: 'It is possible that arrangements requested by the landowner can result in poor quality restoration and problems in subsequent years, and may not be the preferred approach. On the other hand, the contractor may not be as familiar with the specific limitations associated with the soil type or specified equipment for restoration. It is recommended that a professional agronomist/ agrologist be retained to review the proposed restoration technique and its application with the contractor and the landowner, in order to ensure that optimal results are achieved.'

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August 29 - HM46 decompaction of dry subsoil to 35cm using a bulldozer mounted ripper



August 29 - HM44 ripper penetrated wet subsoil to aerate causing smearing, not decompaction



September 19 - HM44 farm equipment used for soil decompaction and restoration



September 1 – HM45 pile of field stone picked by machine and by hand from subsoil



September 7 - HM46 dump trucks used to load out rock from water crossing turning on topsoil



October 19 - HM34 tilling and leveling subsoil and overworking to a damaged, vulnerable state



December 1 - HM36 trenchline mound of replaced topsoil trapping surface water flow



Dec 1 - HM48A no ponding on decompacted easement vs on non decompacted TLU to the left

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5.9.2 Soil Conditions after Construction

Landowners experienced soft soil conditions on the easement in the late fall once wet up that continued to the following spring. Soils on the easement having been disturbed during the construction period were altered from their previous structural state. A soils structure that determines its strength is dependent on its natural ability to form and maintain pore spaces for air, water and gas exchange. Topsoil returned the year of construction will be limited initially in reestablishing a structure that will drain water efficiently and resist being compressed from traffic.

Caution should be provided to landowners of the risk of rutting and compaction until soils are sufficiently dry for tilling the year following construction and topsoil replacement. If there is a need to cross the easement, mitigation measures should be provided as was done for one landowner with the installation of a construction wood mat lane across the easement



HM44 rutting of soft soil on easement by farmer in fall pre tiling - December 1



HM45 rutting of soft soil on easement by farmer in fall pre tiling - December 1



HM34 rutting of soft soil on easement by farmer in spring - June 5



HM43 wood mat access provided across easement in spring after rutting and erosion - June 5

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5.9.3 Year after Construction Restoration

Restoration of soils on the easement for 14 agricultural properties was incomplete by the end of the construction year. The suggestion by Union Gas and Contractor staff initially that there would be opportunity near the end of the year’s soil restoration for evaluating and discussing compaction and grading needs of each property did not materialize. A summary of the status of soil restoration activities by property including those still needing decompaction the year after construction was developed by the LRA and Union Gas soil inspector. Soil restoration activities that remained outstanding included the decompaction of subsoil and topsoil, stone picking of topsoil, cover crop establishment, tile repair and tile installation. Additional restoration requirements of the easement were evident after the winter and spring from low wet areas, soil erosion and soil subsidence of the trenchline. Land that was sensitive to erosion due to slope and lack of protection was particularly impacted, as observed below on June 5 when restoration began in 2017.



HM22 sandy soil accumulation up to straw bale height from wind and water erosion overwinter



HM41 sloping field with water erosion only on laneway as protected from overwinter cover crop



HM34 severe gully erosion (4ft.) on bare unprotected slope overwinter



HM40 deep rill erosion formed from flow across easement



HM43 severe gully erosion on unprotected slope overwinter

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5.9.3.1 Restoration of Soil Erosion Example

Monitoring of agricultural land identified the potential risk of soil erosion from the HM34 property. The easement transected its field of long, moderately sloping hillslopes and side slopes of medium textured soil type. Concerns of the sensitive nature of the site were first noted in the daily report September 8 after a rainfall caused extensive rilling on the slopes of the property. This indicated the need to develop site specific erosion control measures for the area as it would be very susceptible to topsoil erosion overwinter and spring following construction.

Erosion of subsoil off the slopes with sediment deposition off easement continued until the grade was restored and topsoil was returned October 19. Overworking the subsoil and tilling the topsoil up and down the predominant slope added to the erosion risk. Discussion of the urgent need for enhanced erosion control measures in the area with inspectors was ongoing as significant losses with rills and small gullies was evident throughout the easement field by November 7 after only one heavy rainfall. There was difficulty in getting hold of the operator by Union Gas to discuss options that limited the implementation of effective soil protection practices. In particular, the operator had agreed to the construction practice of seeding an annual cover crop though the site warranted a winter rye cereal planted as soon after construction as possible. Union Gas and the contractor resigned to dealing with the inevitable erosion during the 2017 clean-up and restoration.

The erosion control needs of the HM34 property stream crossings were partially met November 14 with the establishment of physical barriers (line of hay bales, mulch erosion sock) across the easement at the bottom of the east facing slope, and cross slope shallow tillage on the severely eroding hillslopes. It was noted that surface runoff and soil erosion from the hillslopes would not be significantly reduced without established plant or residue cover.

The severe erosion concerns were realized with the formation of gullies visible across the HM34 property easement first observed on March 28. Soil restoration of the site was not undertaken until July 19. Circumstance prevented communication in reaching the operator, of the intention of Union Gas to restore the severe erosion, until the easement had been all worked and planted with the exception of the most severely eroded east facing toe slope area.

Restoration steps began with the grading and filling in of gullies and rock picking followed by the importation of good quality topsoil from the same source. More than 30 truckloads were used to replace some of the topsoil loss from the eroded slopes. Further erosion protection work through July 26 created narrow surface water diversion berms and a raised midslope ridge intended to break up downslope flow, as well as subsoiling and tilling on an angle to the slope. The surface was finished by seeding of an annual cereal down the predominant slope, contrary to earlier discussion of planting across the slope. The planting of the annual cover crop oats (a landowner decision) will result in it dying with the first hard frost leaving no living crop throughout the winter and in the early spring to hold unstructured soil, to provide cover and to draw moisture from the soil.

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Followup investigation of the sloping HM34 lands August 12 found extensive rilling from subsequent rainfall events, breached water diversion berms from runoff, as well as little cover crop germination over the 2 week period. A more concerted effort in providing physical barriers and cover of the poorly structured, unconsolidated soils was needed. Soil restoration efforts were reengaged August 21 with the grading of surface rills, reshaping of diversion berms and the addition of erosion control mulch socks intended to also interrupt flow and encourage infiltration. Further discussion with the landowner by the LRA resulted in a commitment to seed down the easement to hay. Planting of the hay crop by the landowner was not completed, however, until 6 weeks later when the time for successful establishment was reduced. The risk of continued soil erosion losses overwinter for the site remained significant.

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September 8 extensive subsoil rilling down slope indicative of susceptible erodible material



September 8 subsoil sediment deposition at toe slope from water erosion adjacent to creek



November 7 topsoil rilling on foot slope after downslope tillage and soil left unprotected



November 14 erosion sediment protection of creek but not for soil loss from susceptible slope



March 28 severe gully erosion overwinter looking west up slope



July 15 extensive gully erosion across foot slope awaiting restoration



July 26 erosion features graded out and topsoil added though limited slope erosion protection



October 10 established additional erosion protection across foot slope done on August 21

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5.9.3.2 Restoration of Uneven Surface Example

Subsidence over the trench line overwinter and the year after construction was not noticeable except for small isolated locations. The mound of topsoil that was left over the trench line largely remained. Unevenness in the surface of the easement was most pronounced on the HM44 and HM45 properties that had tile lines installed in December. Compaction from the tile plough tracks in moist to wet soil conditions and the lifting of the soil in between over the tile lines resulted in an unevenness that resembled soil subsidence over the trench line.

Restoration was undertaken in June 2017 in dry conditions when topsoil of medium texture was imported to mix with the native fine texture topsoil. Existing topsoil was stripped in part before topsoil was added and the native topsoil was returned. Extensive grading of the area with a small bulldozer and agricultural implements leveled the field.



June 5 - HM44 uneven surface in area of tile drainage installation and trench line



June 14 – HM44 angled tractor tilling surface across easement near tile install and trench line



June 14 - HM44 topsoil stripping along low area of trench line and importing topsoil to mix



June 15 - HM44 restored grade of easement after importing topsoil and extensive leveling

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5.10 Communication

The ICM reported on construction activities on agricultural lands and concerns with Daily and Weekly Reports throughout the project. Observations of the ICM were discussed over the phone occasionally with the Committee's Union Gas Project Manager and the GAPLO representative in identifying areas that required improvement. The one conference call with the Committee did provide an opportunity for the ICM to exchange information and receive valuable feedback in fulfilling its role. Recognition of concerns raised in Daily Reports to the Construction Superintendent also relied on communication with the Union Gas construction team on site to consider its importance. Direction of the contractor or subcontractors by the ICM was not authorized and communication of the ICM with landowners was to be only when requested by the landowners.

Landowner construction concerns prior to, during and after construction were not formally disclosed to the ICM, other than the preconstruction survey, as the LRA was the projects point of contact. Involvement of the ICM from the preliminary steps with landowners would have provided additional agricultural perspective for better informed decision making. Knowledge of agricultural and land protection issues would have supplemented information available from the LRA in discussing pros and cons and the recommendation of sound practices, as illustrated with the insufficient erosion control measures agreed to for HM34.

The communication procedure for any discussion between the ICM and landowners during the 2017 clean-up phase the year after construction was clearly outlined by the Union Gas construction superintendent. Communication with landowners was only to be through the LRA as the first point of contact. Discussions of clean-up plans to address problems with the agricultural lands were to be reviewed between Union Gas, the inspector and the monitor. Discussion between landowners and the ICM was asked to include the LRA or inspector to maintain an informed line of communication. A reciprocal arrangement of informing the ICM of landowner discussions or concerns was not provided. Based on the observations of communication, the following are recommended guidelines:

- a. Communication of ICM Committee with **written and verbal exchange** to be at regular intervals or as requested
- b. Landowner to be made aware of **ICM role** during preconstruction interview and the availability of ICM for consultation, in addition to the LRA during construction
- c. Landowner interview information should include a **farm planning map** in documenting identified site specific issues eg. tile drainage, farmer access, wet areas
- d. If LRA is the primary contact for landowners, familiarity with agricultural challenges and farming concerns is important; **daily communication updates** to be exchanged with ICM
- e. On-site meeting request by landowner to discuss construction practices to be arranged with the appropriate Union Gas contact **and ICM**

6. Conclusion

Members of the construction team recognized that pipeline construction on agricultural lands required a set of practices that protected the soil and the landowner's concerns. The LOU was adhered to though circumstance and insufficient decision making did not permit aspects to be fully compliant. A small number of landowners were actively engaged with correcting impacts of construction to their properties particularly during clean-up and restoration but actions were followed through to amend situations as they arose. Construction during the dry summer and early fall was when the least impact to soil was most likely to occur. Timing of construction and the condition of each individual property for conducting a practice were the critical factors in managing the potential impact from construction. Improvements in practices were identified though, that could be incorporated to better protect the soil resource. Union Gas showed a willingness in management to develop improvements but implementation at the ground level was less adaptable and given a lower priority especially around construction deadlines. Significant impacts to sensitive lands and potentially to the off easement environment were the consequence. The shared goal was always to return land to preconstruction conditions ASAP; however, the realistic timeframe to complete construction and restore lands before impacts are experienced should be condensed, or accept that restoration under suitable conditions is to be completed the year after construction.

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Appendix A: Construction Monitor Role Description

CONSTRUCTION MONITOR ROLE DESCRIPTION

Accountability

The Construction Monitor (Monitor) is accountable to and reports directly to the Construction Monitor Committee (Committee).

Scope

The Monitor shall observe and report on pipeline construction activities for the 2016 Union Gas Limited (Union) 48" pipeline from Hamilton to Milton. Observation shall be limited to impacts of construction on the land, including right-of-way preparation, and clean-up operations as well as Wet Soil Shutdown (WSS) events.

The monitor shall review construction activities for compliance with the Ontario Energy Board (OEB) Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union and all specific construction commitments included in Union's construction contract.

The WSS practice is defined in the LOU. The Monitor does not have the authority to decide when WSS is required. When requested by an authorized representative of the Committee the Monitor shall render an opinion of whether or not construction work took place in wet soil conditions as defined in the LOU.

The Monitor shall limit contact with landowners to situations where a specific request is made by the landowner or the Committee. When a request is received, the Monitor shall respond within 24 hours.

The Monitor shall be present on the construction work site and will be subject to the safety program established by the pipeline contractor, including safety training and qualification prior to entering the work site.

Deliverables

Reports shall be completed in accordance with the sample documents attached hereto. Such reports shall not be subjected to review or editing by any member of the Committee or their sponsor organizations prior to submission.

Daily reports shall be submitted simultaneously and directly to the GAPLO and Union Committee members. Weekly reports shall be submitted simultaneously and directly to all members of the Committee.

A final report generally summarizing all reports shall be provided at the end of the contract term. The report shall contain the following:

- Communications with landowners and the Committee.
- Potential construction activity improvements.
- Log of landowner complaints with date and time;

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- Substance of each complaint;
- Actions taken in response to the complaint and the reasons for such actions; and
- Reporting requirements.

The Monitor shall verbally report any violations of conditions, landowner agreements or specifications immediately to the Union inspector on site and in writing to the Chief Inspector and to members of the Committee as soon as possible.

Qualifications

1. Graduate of a recognized Community College or University with a background in environmental sciences or agronomy.
2. Experience with heavy construction, preferably in pipeline construction.
3. Knowledge and experience with soil characteristics and agricultural practices.
4. Proven ability to understand and interpret technical and legal specifications and permits. The 48" Hamilton to Milton pipeline project will require familiarity with:
 - a. Ontario Energy Board Decision EB-2014-0261;
 - b. Ontario Energy Board 'Conditions of Approval';
 - c. Letter of Understanding (LOU);
 - d. Contents of the construction contract including:
 - i. General Conditions of the Contract
 - ii. Construction Specifications
 - iii. Construction Drawings
 - iv. Special Landowner Requirements
 - v. Environmental Permits and the Environmental Construction Plan
 - e. Environmental Assessment;
5. Excellent communications skills and interpersonal skills exhibiting tact and diplomacy; and
6. Ability to provide independent judgement so that an unbiased third party viewpoint is maintained.

Equipment

The Monitor shall have the following equipment available and operable at all times:

- Pickup truck with four wheel drive capability.
- Insurance in accordance with Section 38 of the General Terms and Conditions.
- Laptop computer and printer.
- Digital still image and video capture equipment. Film still image equipment.
- Cell phone with message service.
- Personal protection safety equipment (hard hat, safety boots, eye protection, safety vest).

Term and Hours

Term: Nominal February to March 2016

Hours: As required, not to exceed 10 hours per day, 6 days per week.

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Appendix B: Reference Documents

Ontario Energy Board, Union Gas Limited – Dawn Parkway 2016 Expansion Project, Decision and Order EB-2014-0261, April 30, 2015

- Appendix A, Map of the Project
- Appendix B, List of Intervenors
- Appendix C, Settlement Agreement
- Appendix D, Conditions of Approval
- Appendix H, NPS 48 Hamilton to Milton Landowner, Roads and Special Requirements
 - Letter of Understanding
 - Trafalgar Line System – NPS 48 Hamilton Milton 2004, Rev 24/04/2015

Union Gas, TFEP NPS 48 – Hamilton to Milton 2016 Construction, Pipeline Construction Alignment (drawings 2016-02-19)

Union Gas, Major Projects' Construction Specifications, Pipeline Construction (2016-04)

Stantec Consulting Ltd., Hamilton to Milton Pipeline Project: FINAL Environmental Construction Plan – Construction,

Ontario Energy Board, 2016. Environmental guidelines for the location, construction and operation of hydrocarbon pipelines and facilities in Ontario. 7th Edition,

Union Gas, Hamilton Milton Master Construction Schedule Rev 7 2016-05-17.xlsx

HM Pre-Construction Meeting Form.pdf (32 completed properties)

Landowner Requirements HM NPS48.xlsx (last ver. 2016-08-18)

Landowner Complaint Summary 2016 NPS48 Hamilton-Milton.docx (blank form)

Proposed Property Details 16-038_August 16.pdf (tile drawings for 7 properties)

Land clean-up restoration 2017.xlsx (clean-up completion chart)

Union Gas Ltd Hamilton to Milton NPS 48 Loop Pipeline, Construction Monitor Daily Report

Union Gas Ltd Hamilton to Milton NPS 48 Loop Pipeline, Construction Monitor Weekly Report

Land File No.: _____

Project: _____

INTERVIEW

Date: _____	Person(s) Interviewed: _____
Completed By: _____	

CONTACT INFORMATION

Landowner Name(s): _____	Tenant(s): _____
Address: _____	Address: _____
Phone/Cell No.: _____	Phone/Cell No.: _____

LEGAL DESCRIPTION

 PIN(s) _____ (LT) Part Lot _____, Concession and/or Plan No. _____, Municipality _____

AGRICULTURAL CROPS

Crop planted in year of construction. (Instructions for removal) _____ _____ _____	<input type="checkbox"/> Corn	Cover Crop Program <input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Soybean	Top Soil Stripping <input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Grain	Excess Soil <input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Hay	Stone/Debris (To be removed from existing easement) <input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Pasture	
<input type="checkbox"/> Other _____		If, yes landowner may require permit from Conservation Authority. If yes, from where to where

WATER WELL

Location(s): _____	Active <input type="checkbox"/> Yes <input type="checkbox"/> No	Monitoring Results <input type="checkbox"/> Yes <input type="checkbox"/> No
Type: _____	Abandon <input type="checkbox"/> Yes <input type="checkbox"/> No	
Age: _____		

FIELD DRAINAGE TILE

Location(s): _____	Tile Drain Plans <input type="checkbox"/> Yes <input type="checkbox"/> No
Type: _____	Special Tile Instructions <input type="checkbox"/> Yes <input type="checkbox"/> No
Age: _____	Prior tile drainage repairs <input type="checkbox"/> Yes <input type="checkbox"/> No
Prior tile drainage repairs <input type="checkbox"/> Yes <input type="checkbox"/> No	

WOODLOTS

Tree Planting Program <input type="checkbox"/> Yes <input type="checkbox"/> No	Disposition of logs adjacent to easement (where) _____
Destumping Required <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Total Easement <input type="checkbox"/> 6m strip

ACCESS DURING CONSTRUCTION

Across right of way <input type="checkbox"/> Yes <input type="checkbox"/> No
--

FENCING REQUIREMENTS

Location <input type="checkbox"/> Yes <input type="checkbox"/> No _____
Gates <input type="checkbox"/> Yes <input type="checkbox"/> No _____
Temporary <input type="checkbox"/> Yes <input type="checkbox"/> No _____

SITE SPECIFIC REQUIREMENTS

**UNION GAS LIMITED HAMILTON TO MILTON NPS 48 LOOP PIPELINE
CONSTRUCTION MONITOR DAILY REPORT**

Date	Contractor Name
Report No.	Monitor Name

LOCATION	
County _____	Township _____
Conc _____	Lot _____
From Station _____	To Station _____
Landowner Names & File #'s	<div style="border: 1px solid black; height: 40px;"></div>
Road/Rail/Water Crossings _____	

WEATHER	Today
(Temperature/ Rainfall/ Comment)	Forecast

OPERATIONS											
Clearing	<input type="checkbox"/>	Pipework	<input type="checkbox"/>	Water Crossing	<input type="checkbox"/>	Stripping	<input type="checkbox"/>	Trenching	<input type="checkbox"/>	Drain Tile Repair	<input type="checkbox"/>
Grading	<input type="checkbox"/>	Backfilling	<input type="checkbox"/>	Access/Culv/Bridge	<input type="checkbox"/>	Fencing	<input type="checkbox"/>	Boring	<input type="checkbox"/>	Erosion Control	<input type="checkbox"/>
Stringing	<input type="checkbox"/>	Road Xing	<input type="checkbox"/>	Clean-Up	<input type="checkbox"/>	Bending	<input type="checkbox"/>	Rail Xing	<input type="checkbox"/>	Other	<input type="checkbox"/>

PHOTOGRAPHY						
Photographs	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Identifiers	<input type="checkbox"/>
Camcorder	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Identifiers	<input type="checkbox"/>

COMMENTS

Monitor's Signature

**UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE
CONSTRUCTION MONITOR WEEKLY REPORT**

Date	Contractor Name
Report No.	Monitor Name

WEEK OF Monday _____ to Sunday _____
--

WEATHER	Date	Temperature	Comment

CONDITIONS ON THE RIGHT-OF-WAY	
Day(s)	Conditions

<u>CONSTRUCTION PROGRESS TO DATE</u>

<u>WET SOIL SHUTDOWN</u>

**UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE
CONSTRUCTION MONITOR WEEKLY REPORT**

Date	Contractor Name
Report No.	Monitor Name

SUMMARY RE UNION'S MONITORING PROGRAMS

ADDITIONAL MONITOR COMMENTS

DISTRIBUTION:

Monitor's Signature

ATTACHMENT 14

**Union Gas Limited Panhandle Reinforcement
Dawn to Dover Station NPS 36 Pipeline Project**

Independent Construction Monitor Final Report

Attention:

**George Adams
Project Manager
Union Gas Limited
PO Box 2001, 50 Keil Drive North
Chatham, ON**

December 2018

Submitted by:

**The Soil Resource Group
50 Crimea Street
Guelph, ON
N1H 2Y6**



SOIL RESOURCE GROUP

Union Gas Limited Panhandle NPS36 Pipeline Project

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1. Executive Summary

Union Gas Limited and the Ontario Energy Board (OEB) completed a Settlement Agreement for the construction of approximately 40km of the NPS 36 pipeline (36 inch diameter) to replace an existing NPS16 pipeline in a pipeline corridor extending from the Dawn Compressor Station in Lambton County to the Dover Transmission Station in Chatham-Kent Municipality. The Agreement referred to as the Panhandle Reinforcement – Dawn to Dover Station Project and referenced as OEB EB-2016-0186 considered issues raised by stakeholders including the Canadian Association of Energy Pipeline Landowner Associations that recognizes the needs of impacted landowners. The Panhandle Landowner Committee (CAEPLA-PLC), a subcommittee of CAEPLA, negotiated a Letter of Understanding (LOU) on behalf of affected landowners that included the need for Union Gas to appoint an independent construction monitor for construction on the agricultural lands portion. The construction monitor was chosen by representatives from Union Gas and CAEPLA-PLC to report on issues related to the Letter of Understanding (LOU). The LOU outlines the obligations of Union Gas with respect to: i) the construction of the pipeline; ii) remediation of the landowner's property; and iii) compensation to the landowner for various damages as a result of the construction of the pipeline. The scope of work for the construction monitor did not include part iii) or any financial matters between Union Gas and landowners but was:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union;
3. To review all specific construction commitments included in Union's construction contract;
4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

The Independent Construction Monitor (ICM) role was completed by The Soil Resource Group using a team of three qualified soil science professionals, each with over 25 years of experience working with agricultural soils in Ontario. One of the Monitors was on-site each day throughout the construction period when activities included or may have included agricultural lands. The ICM in its stated role was limited in contact with landowners to situations where a specific request was made by a landowner or the Joint Committee. The Joint Committee was made-up of one CAEPLA-PLC landowner representative, one non-CAEPLA-PLC landowner representative and three Union Gas representatives including the Project Manager and Construction Superintendent. Communication with the Joint Committee by the ICM was channeled through the Monitor Lead primarily through written weekly monitoring reports as well as phone call and email correspondence to discuss issues of concern and clarification. Daily communication with Union Gas staff was initiated with a 6:30am Construction Meeting with inspectors held at the Union Gas Wallaceburg yard office that outlined the daily work activities and safety issues. The daily activities that were observed, the associated soil conditions and related comments or concerns were summarized by the ICM each day in a Daily Report and forwarded by email to the Construction Superintendent.

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Communication with the Joint Committee included the email submission of a Weekly Report by the ICM Lead to the Project Manager, landowner representatives and the Project OEB representative. The Weekly Report summarized the Monitors Daily Report observations and concerns from each week. The ICM did not exercise any authority to decide when Wet Soil Shutdown was required and were not requested by the Joint Committee to render an opinion if construction work took place in wet soil conditions as described in the LOU. Comments were not received back from the OEB representative or Project Manager, though observations and points of clarification were discussed regularly over the phone with the Union Gas Construction Superintendent or the CAEPLA-PLC committee member separately. Construction issues that were discussed included topsoil stripping method, SCN biosecurity protocol, wet soil shutdown criteria, Soil Inspector decision support, backfilling method, topsoil importation, soil restoration practices and drainage tiling. Communications between the ICM team and landowners were minimal as the two Land Relations Agents (LRAs) were designated as the first point of contact for the project. The impact on the agricultural land made up of 118 properties was the focus of ICM monitoring activities.

The attention committed overall by the project construction team in following the LOU was recognized by all three members of the ICM team. It must also be recognized that observance of the LOU and Union Gas specified construction practices was dependent on a cooperative effort with the contractor and subcontractors that were capable and committed to fulfilling the project obligations. The commitment and oversight of the full-time Soil Inspector was paramount to the overall success of the protection of soils of the large number of agricultural properties. Compliance with the sections of the LOU was observed with the correction of a number of issues associated with topsoil management, soil restoration, tile drainage and wet soil shutdown. In a number of situations, small variances in managing soil that risked damage were attributed to individual operator or supervision error and insufficient oversight of qualified specialists with soil and agricultural experience.

The required pipeline construction activities to meet the in-service deadline extended late into the fall of 2017 (construction completed December 8, 2017). This increased the risk of soil damage from construction activities when conditions were wet and proper restoration of easement lands was therefore not possible with the length of the construction season well into the fall. The clean-up phase was largely incomplete the year of construction on the large majority of the agricultural properties. Subsoil decompaction and topsoil spreading was completed for much of 40 properties of which 22 of these properties received final restoration with final grading and topsoil decompaction the year after construction. At the end of the year of construction, 15% of agricultural properties did not receive further soil restoration and landowners signed off. The other 78 properties (66%) had topsoil overwintered and subsoil decompaction and topsoil restoration was completed the year after construction. It was evident that the project scale and concentration of agricultural lands required completion of the field and soil restoration under suitable conditions the year after construction.

Wet soil shutdown events that resulted in a full shut down of activities on the soil easement were declared on several occasions during the year of construction in a generally wet year. The total number

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of partial or full shut down days affecting construction plans on the agricultural lands was 73 days. Declaring a partial shutdown often required on site interpretation and recognition of what constitutes an adverse effect on soil that was primarily a determination of the Soil Inspector on site who advised the Construction Superintendent in making a decision. Assessment of site conditions was discussed with the ICM and confirmed on site by the ICM in ensuring compliance by the contractor and subcontractors. Interpretation of an adverse effect on soil was largely removed from experienced field personnel that reduced the incidence of inconsistencies between contractor foremen and potentially damaging activities observed on a previous project. Occasionally work continued when environmental conditions or in-service deadlines needed to be met when mitigation measures developed on a site specific basis were not always sufficient. Traffic by rubber tired vehicles during wet weather conditions was occasionally carried out on the easement though the extent of rutting was typically low as soils became packed firm from heavy traffic and moisture infiltration was low. Avoiding standing water by the contractor needed to be reinforced both years.

Drainage tiling activities were initiated the year prior to construction in establishing header tiles along the easement to maintain field drainage off easement prior to and during the construction year. With a small number of properties restored late in the year of construction, drainage tiling activities that year was limited to the repair of main tiles that crossed the easement. Tile installation along the easement for agricultural properties occurred the year after construction during the drier summer to early fall period once the soil restoration steps for a property had been completed. Tiling continued throughout the easement until soils wet up and conditions were too soft for vehicle traffic in the fall. Tile installation was incomplete and postponed indefinitely for approximately 10 landowners at the end of the season.

Monitoring the impact of pipeline construction on the agricultural land largely considered the impact to soil, a farmer's most valuable resource. Significant disturbance of soil by the construction of a pipeline cannot be avoided. Disturbance should therefore be minimized and the extent of construction practices that impact a soil's function to support plant growth will influence the length of time that soil will be able to return to its previous state and productivity potential. Observations by the ICM of the pipeline construction practices and soil related activities were examined in the Discussion section that were the basis of a number of recommended practices to be introduced or reinforced. These observations recognize the needs of landowners in light of the Union Gas construction process.

2. Introduction

Union Gas Limited (Union) and the Ontario Energy Board (OEB) arrived at a Settlement Agreement within the Decision and Order OEB EB-2016-0186, that included the construction of approximately 40km of NPS 36 pipeline (36 inch diameter) and replace an existing NPS16 pipeline in an existing pipeline corridor extending from the Dawn Compressor Station in Lambton County to the Dover Transmission Station in Chatham-Kent Municipality (Ontario Energy Board 2017).

The Settlement Agreement considered issues raised by stakeholders including the Gas Pipeline Landowners of Ontario (GAPLO) pertaining to the project. Based on written and verbal arguments to the OEB from GAPLO (GAPLO 2015), Union Gas agreed to the appointment of an independent construction monitor (ICM) for construction on agricultural lands for the Hamilton-Milton pipeline. The construction monitor was chosen by a committee consisting of one representative from each of Union Gas, the OEB and GAPLO, referred to as the Construction Monitor Committee. Committee members were Rob Marson (Union Gas), Ian Goudy (GAPLO) and Zora Crnojacki (OEB).

Included in the Settlement Agreement was a Letter of Understanding (LOU) that was used to negotiate agreements between Union Gas and the landowner of each of the affected properties. The LOU outlines the obligations with respect to: i) the construction of the pipeline; ii) remediation of the landowner's property; and iii) compensation to the landowner for various damages as a result of the construction of the pipeline. The Decision and Order also contained Conditions of Approval from the OEB stating the requirements that Union Gas were to comply with such as communications and reporting for the construction of the NPS 48 Hamilton to Milton pipeline.

2.1 Scope of Work of Construction Monitor

The scope of work for the construction monitor as listed in the LOU was:

1. To observe impacts of construction on the land, including right-of-way preparation, trenching, backfill and clean-up operations as well as wet soil shutdown events;
2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and Union;
3. To review all specific construction commitments included in Union's construction contract;
4. To respond to specific requests by landowners and the committee within 24 hours while maintaining limited contact with landowners on a day-to-day basis; and
5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.

The construction monitor, working independently, was accountable to the Joint Committee. However, the function of the ICM as outlined in the Union Gas Construction Monitor Role Description (Union Gas 2016) was to be present on the work site to observe and report on pipeline construction activities that may impact the land, including right-of-way (RoW) preparation, clean-up operations and Wet Soil Shutdown (WSS) events.

3. Methods

3.1 Construction Monitor Team

The construction monitor role was delivered by The Soil Resource Group using a team of three qualified soil science professionals, each with over 25 years of experience working with agricultural soils in Ontario. Deployment and reporting throughout the construction period was equally shared by the three ICM's led by Don King, MSc, CCA-ON (President at The Soil Resource Group) along with Eric Wilson, BSc (retired OMAFRA pedologist) and David Hodgson, BSc (President at DBH Soil Services).

3.2 Communication

Formal communication amongst the ICM team included recording field notes daily and taking pictures daily of construction activities before forwarding in a Daily Report by email to the Construction Superintendent and the other two ICM Monitors. Additional communication by phone or digital messages updated each of the ICM team members on the status of construction progress and urgent issues as they arose.

Communication with Union Gas staff was initiated daily with a Construction Meeting with inspectors held at the Union Gas Wallaceburg yard site office at 6:30am each morning that outlined the daily work activities and safety issues. Weekly Construction Meetings were held for the construction team for project updates at the site office that the ICM was not invited to attend. The ICM in its stated role was limited in contact with landowners to situations where a specific request was made by a landowner or the Joint Committee. Meetings of the Joint Committee held monthly or when landowner representatives were available were held at the site office of which the ICM was not invited to attend. Communication with the Joint Committee was channeled through the ICM Lead primarily through written weekly monitoring reports submitted by email to the Project Manager, the CAEPLA-PLC and non CAEPLA landowner representatives and the Project OEB representative. Observations and points of clarification were discussed regularly over the phone with the Union Gas Construction Superintendent and the CAEPLA-PLC committee member separately.

3.3 On-Site Monitoring

The ICM was on-site throughout the construction period when activities included or may have included agricultural lands in following the Letter of Understanding (LOU). The ICM did not exercise any authority to decide when Wet Soil Shutdown was required. The ICM was not requested by an authorized representative of the Joint Committee to render an opinion of whether or not construction work took place in wet soil conditions as defined in the LOU. In general, the construction specifications, alignment drawings, environmental construction plan, soil sampling results and landowner line list were referred to in assessing the impact on agricultural lands as they related to the LOU.

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3.4 Reporting

Template spreadsheet report forms issued from Union Gas were completed for the Daily Report and the Weekly Report. Observations of daily activities, associated soil conditions and related comments or concerns were summarized by the ICM on site that day and forwarded by email to the Construction Superintendent and the other ICM team members. Weekly Reports were completed by the ICM Lead that summarized the daily reports for the week and submitted it by email simultaneously to the members of the Joint Committee: the CAEPLA-PLC and non CAEPLA-PLC landowner representatives, the Project Manager, and the Project OEB representative. The documents submitted were not reviewed or edited by Union Gas staff or the Joint Committee prior to submission.

4. Results

4.1 Communications with the Committee and Landowners

The submission of Weekly Reports to the Joint Committee did not generate comments from the Project Manager or OEB representative. Points of concern and clarification were regularly discussed in person and over the phone with the Union Gas Construction Superintendent, who reported to the Project Manager, and the CAEPLA-PLC representative, separately. Construction issues that were discussed included topsoil stripping method, SCN biosecurity protocol, wet soil shutdown criteria, Soil Inspector decision support, backfilling method, topsoil importation, soil restoration practices and drainage tiling. Individual meetings were held between the ICM Lead and CAEPLA-PLC members, with the non CAEPLA representative and with the CAEPLA executive in discussing construction project issues and the role of the ICM. Discussions covered activities of the Independent Construction Monitor, areas of concern and expected communication during the construction project.

Communications between the ICM team and landowners were occasional as the two Land Relations Agents (LRAs) were designated as the first point of contact for landowners throughout the construction year and following clean-up year of the project. Requests were infrequently made by the LRA's or individual landowners to the ICM to meet with landowners on site to provide an independent perspective of a specific soil and agricultural related concern. Discussions with landowners occurred most often when they were on site to observe activities on their property. Further direct contact with landowners was limited due to the extensive communication with and availability of the Union Gas LRA's to inform and discuss issues. Limited contact from landowners part way through the construction year prompted CAEPLA to provide correspondence with impacted landowner members informing them of the availability of the ICM. It was unknown whether landowners were made aware of the ICM position preconstruction or reminded during construction as being available as an additional resource as part of the on-site construction team.

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Discussions of clean-up plans and any need to address problems with the agricultural lands were reviewed between Union Gas inspectors, the Soil Inspector and the ICM to maintain an informed line of communication.

4.2 On-Site Monitoring

The involvement of the ICM on the Panhandle Project began with the tree clearing activities from February to March 2017, reported earlier. The ICM began on-site monitoring of the summer construction work May 1, 2017 that continued until the 2017 activities on agricultural lands ended November 16, 2017. Monitoring of the restoration work continued the year after construction from June 13 until October 26, 2018. In following the LOU, the ICM did not exercise any authority to decide when Wet Soil Shutdown was required though observations of unsuitable conditions were actively discussed with the Soil Inspector, Union Gas foremen, and the Construction Superintendent when necessary.

4.3 Reporting

Activities on 118 agricultural properties were monitored by the ICM. Observations for the Panhandle Project including restoration the year after construction were recorded in 273 Daily Reports and further summarized in 50 Weekly Report submissions using the Union Gas template provided. Digital picture records (>3000) with date, time and location taken over the duration of the project have been stored electronically.

4.3.1 LOU Compliance of Construction Activities

The monitoring of the project construction activities on agricultural lands and their direct compliance with the related sections of the LOU have been summarized below. Further observation and recommended improvements to the construction practices were included in the Discussion.

Sec.1. Pre-Construction Meeting

Compliant: Preconstruction interviews were undertaken by the Land Relations Agents and the Construction Superintendent in the winter and spring 2017 to discuss and record site specific issues such as need for access across easement, use of a mulch layer under stripped topsoil, use for excess subsoil, crop spraying and implementation of mitigation and rehabilitation measures.

Sec.2. Testing for Soybean Cyst Nematode

Compliant: All agricultural easements along the pipeline route were sampled in fall 2016 before construction by a soil specialist with Stantec. The SCN soil sampling field program results mapping indicated that most properties tested positive for Soybean Cyst Nematode (SCN). Topsoil imported to the easement lands from off easement after construction during clean-up was tested by Stantec for SCN and was reportedly negative. A copy of the test results were not known to be forwarded to the landowners that received topsoil and were not forwarded to the ICM for confirmation.

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Sec.3. Continued Supply of Services

Compliant: Maintenance of services was undertaken by the contractor and Union Gas.

Sec.4. Water Wells

Compliant: Monitoring the quality of well water was undertaken by the project's environmental personnel. One landowner complaint of well water quality determined not to be related to construction remained unresolved at the time of the Post Construction Report.

Sec.5. Staking of Work Space

Compliant: The outside boundary of the easement and temporary land use area of the project workspace was marked using red painted wooden stakes with chainage marked at intervals of 30m or less prior to construction and remained until after topsoil was stripped. Work activities did not exceed the easement boundary though small areas of topsoil piling extended beyond the boundary. Occasionally, topsoil needed to be pulled back with excavators from off easement back onto the pile.

Sec.6. Topsoil Stripping

Partially Compliant: Prior to installing the pipeline in agricultural areas, topsoil was stripped across the entire width of the easement of all agricultural properties as well as across wider temporary land use areas. Topsoil stripping occurred under generally favourable conditions. Topsoil was stripped in two directions from the centre area of the easement to each side separating previously disturbed soils and undisturbed topsoil into two piles, as requested by CAEPLA. The basis of determination of this separation designation was unclear. Topsoil was piled in Temporary Land Use storage areas along the length of the easement and along the wider TLU areas. An additional shallow mixed layer from the topsoil subsoil interface was graded in a pile up to the foot of the topsoil pile. Foreman and operator differences occasionally did not comply in separating the mixed interface layer into separate disturbed and undisturbed piles. Due diligence was implemented to ensure that subsoil piles removed during trenching maintained separation from the topsoil pile. Maintaining 1m of separation was not always done along the easement due to space constraints where trench stability was a concern and greater subsoil was removed to create a more sloping trench face. There was rarely a physical barrier or other mediation practice employed. Determining topsoil depth was occasionally misread by individual operators adding subsoil when stripping. The Soil Inspector was typically present when a new property or soil condition was stripped to establish proper topsoil depth though often inspectors were not present while operators stripped topsoil. Experienced operators were relied upon to identify colour change indicators and maintain consistent separation of soil horizons.

Sec.7. Depth of Cover

Compliant: The pipeline was installed with a minimum of 1.2m of cover that was ensured with the continuous monitoring of the trench depth manually as it was being dug to allow for adequate soil cover of the pipeline and subsequently by GPS measurement of the returned and graded soil cover.

Sec.8. Leveling of Pipe Trench

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Compliant: During trench backfilling, the excess subsoil material was piled on the easement until removal during the year of construction. Landowners indicated in the preconstruction interview and were granted excess soil. It is unknown whether landowners were always given the right of first refusal of any excess material before it was removed as one landowner did not receive material before it was trucked away. Properties with exposed subsoil the year after construction were graded level though isolated areas near the south end and at tie-ins had excess extraneous subsoil removed. For the 40 properties with topsoil returned the year of construction, several had uneven grade differences the year after sometimes related to trench subsidence. The settlement and uneven easement was sometimes repaired by filling in with imported topsoil before grading level. Mounding of topsoil over the trench line that persisted the year following construction was graded level with the second year clean-up activities. A few landowners signed-off and waived further topsoil restoration after the fall of construction waiving additional second year decompaction and grading.

Sec.9. Topsoil Replacement, Compaction Removal and Stone Picking

Partially Compliant: Prior to topsoil spreading, subsoil decompaction was completed under variable conditions. During the year of construction, decompaction was less effective on clayey soils that remained moist but was largely effective on sandy soils and properties worked the year after construction. After subsoil had been graded level with a bulldozer, decompaction was typically done using a deep ripper mounted on a D6 bulldozer or on a grader, followed by a chisel plow disc and harrows that was sometimes followed by a bulldozer pass to level. Deep tillage was done on clayey areas of a few properties when conditions remained unsuitably wet though ponded water was pumped off. Decompaction of the subsoil was incomplete on 78 agricultural properties by late fall when conditions were too wet to be effective. Many landowners were not made aware or presumably uninterested in the type of decompaction implements used. Stones were not an issue in these soils but any were picked from the subsoil by hand to a size not less than 50mm in diameter. Topsoil was returned to 40 properties starting in the north end in the year of construction matching the easement lands with the surrounding grade. All but two landowners requested topsoil be returned the year of construction if conditions were suitable. However, weather and construction decisions did not permit further topsoil return. Topsoil was returned the year of construction and the year after construction under generally favourable conditions using backhoes to pull back and bulldozers to grade level. Initially, a D8 bulldozer with narrow tracks was used to push topsoil but was removed after the compaction risk was recognized. Decompaction of the topsoil used a paratill, followed by a disc ripper tillage implement, and then fine leveling was done with disc and cultivator implements. The soil inspector tested the decompaction of each property for subsoil and then the topsoil on and off easement using a digital penetrometer though the results were not requested by the landowners or provided to the ICM. The depth of topsoil was not checked or adjusted based on final grading.

Sec.10. Drainage Tiling

Partially Compliant: Field drainage systems were considered with the pre-construction activities of installing header tiles in the fall and winter prior to construction, maintaining main tile drainage the year of construction and repairing and adding easement tile to the system the year after construction. A

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Union Gas drainage inspector acted as the liaison between landowners and a qualified independent drainage consultant for the majority of properties. A small number of landowners had another preferred contractor directly involved for their property. A tile plan for each landowner was developed prior to and modified after construction with their consultation. Tile crossings that were intercepted during construction were staked and capped and georeferenced. Main tiles were temporarily repaired across the trench line but not always by a drainage consultant as in the LOU. Some repairs by drainage consultants were not done effectively eg. collapsed tile, as uncovered during the final tile installation the year after construction. Other areas of drainage needs such as a temporary tile plan to receive accumulated surface water, or tile for newly cleared agricultural land were not required. Existing tile lines were not used to directly pump accumulated water into as a result of the construction though a few situations used a filter bag or French drain to drain water from a trench or easement subsoil. Conditions and the clean-up progress did not allow any tile installation work to be initiated by the project tiler the year of construction. Four landowners that had signed-off installed tile the same year. The year after construction, tiling was completed on the large majority of properties with approximately 10 properties not done by end of season.

Sec.11 Water Accumulation during Construction

Compliant: Water accumulated on the easement after rainfall was pumped to suitable areas, primarily road ditches, as directed by the environmental inspectors into filter bags to reduce the release of sediment. A significant amount of resources was dedicated to the removal of accumulated water from the easement during wet soil shutdown periods. Small ponded areas mid road concession were occasionally sprayed onto topsoil piles with minimal erosion and minimal overspray onto agricultural lands. Significant water ponding off easement seldom occurred as a result of piled topsoil blocking runoff though crop damage was addressed through compensation.

Sec.12 Access Across the Trench

Compliant: Access across the easement was maintained for each property field with breaks in the topsoil piles by property. Following pipe installation and backfill, site conditions and landowner situations did not require creating a gravel base on filter fabric across the trench line as outlined in the LOU. Following construction, a wood construction mat laneway on topsoil was provided in one case to allow specialty crop harvest. The restored and reconfigured soils after construction often becomes unsuitable when wet up in the late fall the year of construction until soils dry out the year following construction. Landowners that required access onto the easement during this time experienced severe rutting in spots.

Sec.13 Restoration of Woodlots

Compliant: tree clearing was undertaken prior to construction (February to March) to remove all trees, stumps and brush from the easement. No land was known to be converted from woodlot to agricultural land after construction.

Sec.14 Tree Replacement

Compliant: arrangements to replace trees that were cleared from the easement were made in

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consultation with the landowners.

Sec.15. Covenants

Covenants of Union Gas listed in the LOU were or will be presumably Compliant with the exception of the following covenants that were Partially Compliant:

- i) Survey techniques (GPS) to establish pre-construction and post-construction soil grades were not generally utilized as soils were restored from visual reliance of experienced contractor operators and personnel.
- ii) Proper clean-up practices were completed throughout the affected area; however, a small number of properties did not receive the benefit of the full soil restoration practices of the project. Conditions and resource dedication were not sufficient to complete restoration the year of construction prompting some landowners to sign-off on the commitments and accept compensation to restore their own land, with mixed results.
- iii) Travel on the easement was primarily done in the work area and driving lane for practical reasons, not on the trench line, for much of the construction period from delivering and welding of the pipe prior to trenching until after backfilling was completed. Traffic areas on subsoil before and after this period were inconsistent and not confined to the trench line.
- xi) Landowner Complaint Tracking system was not made available to landowners or the ICM.
- xvi) The Soil Inspector on the project carried out comparative compaction testing on and off easement after construction; however, independent Consultant testing of compaction, fertility and GPS recording of testing after construction was not known to be done.
- xvii) Weed control along the pipeline easement was not fully recognized as a concern by Union Gas the year of construction though sandy topsoil piles that were hydromulched to reduce wind erosion benefited in also controlling some weeds. Attempts were made by some landowners to spray topsoil piles or cut weeds on gored land that grew to maturity. Attempts were made the year after construction to mow weed growth and seeded cover crops though weed regrowth was allowed to become well established prior to drainage tiling as well as after drainage tiling without a cover crop being seeded.
- xx) Imported topsoil was required on the easement the year after construction during clean-up to repair subsidence and low areas. Sources of topsoil were evaluated by the soil specialist with Stantec to have attributes suitable for adjacent agricultural soil, and be free of SCN. Reasonable considerations were used except for one clay loam site that received loamy topsoil that was unscreened from off easement. Information of whether each landowner had input or knowledge of the quality or the source of imported topsoil was not provided but indications were this did not occur.

The wet soils shutdown practice for pipeline construction on agricultural lands (LOU Schedule 6) was addressed in a separate section of the report.

The remaining sections in the LOU cover dispute resolution, landowner rights and compensation that were not in the scope of activity for the monitor.

5. Discussion

Monitoring the impact of pipeline construction on agricultural lands largely considered the integrity of the soil in all its profile horizons as being of paramount importance in maintaining proper soil function. Soil has formed over thousands of years and once lifted, mixed, compacted and reconsolidated will be disturbed and damaged for a considerable amount of time. The nature of the construction process cannot prevent a degree of this change from happening in an agricultural soil. The soils ability to function as a favourable medium for plants with sufficient porosity to allow nutrient, water and air exchange throughout the rooting zone extends beyond the topsoil horizon. Disturbance of soil by construction should be minimized firstly, and secondly construction practices that impact the function of topsoil and subsoil will influence the length of time for soil to return to its previous state and productivity potential.

Discussion of the monitoring of the construction practices and related activities by the ICM are grouped as they occurred during the project. A number of related concerns and improvements were identified based on observations to protect a soils function during the construction process in recognizing the needs of landowners and Union Gas.

5.1 Soil Testing

Soil sampling after construction was done for compaction for on easement and off easement using a digital penetrometer by the Union Gas Soil Inspector. Random checking by the Monitors confirmed compaction results that were mostly acceptable as being better than off easement though deeper subsoil compaction near the depth of drainage tile remained. Areas of topsoil compaction were observed in the topsoil storage TLU's. SCN soil sampling was completed prior to construction.

Additional soil sampling was incomplete. Survey of soil depth was not observed to be done. Random checking of the ICM found an even cover of topsoil that was typically more than 15cm returned by experienced operators that matched contour and grade across the easement to match the subsoil grade. Independent Consultant testing of compaction, fertility and GPS recording of testing after construction was not known to be done, as suggested in the LOU.

Based on soil testing observations, the following are recommended guidelines:

- a. Soil sampling for SCN to be conducted by a **qualified** soil specialist pre construction and be combined with an easement assessment (topsoil depth, preexisting mixing width) for each property ensuring biosecurity protocols; that would be used to estimate the required width for disturbed and undisturbed topsoil stripping and storage
- b. Independent Consultant testing of compaction, fertility and GPS recording of testing **after** construction
- c. All soil sampling results to be forwarded to the **landowner and ICM** upon completion

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5.2 Biosecurity

Biosecurity was considered with the potential movement of topsoil bound Soybean Cyst Nematode (SCN) between properties. The extent of the SCN insect pest was identified with soil sampling of agricultural properties preconstruction in the fall of 2016 by soil specialists from Stantec that determined 99 of the 118 properties tested positive. Negative test properties were resampled to confirm. Only one landowner had properties that tested negative south of the Sydenham River, who later waived the need for protective measures for SCN. A SCN protocol was slow to be established with signs indicating SCN positive fields being erected 3 weeks after the onset of construction and insufficient restriction initially of vehicle and personnel movement prior to stripping topsoil. Adoption of a protocol for personnel became better enforced over the first month that included disposable booties over footwear that were replaced with more durable rubber boots dedicated for use only on SCN fields and the use of boot washing stations at roadsides and impacted properties. Equipment wash stations were established at the boundary between SCN and non SCN properties that were well managed in removing topsoil during the topsoil stripping operation.

With the proliferation of SCN in the area, the risk of a breach in biosecurity was considerable. Movement of subcontractors such as mechanics and project vehicles off and back onto roads was an issue that could be improved. However, roads may also be an area of transmission between farm vehicles with impacted fields and project vehicles. The risk of topsoil transmission is reduced when working in dry conditions, emphasizing the importance of a soil shut down when conditions are not suitable. The level of due diligence by the contractor and the inspector team was good in designing a SCN protocol though there was an initial delay in full implementation.

In the clean-up phase, the completion of topsoil return of the clayey soils north of the Sydenham River appeared to maintain SCN protocols. However, properties that were SCN negative that were required to have the SCN protocol maintained throughout the second year activities were not signed that would alert all traffic to comply. Topsoil imported in the clean-up phase was reportedly negative for SCN. An important consideration of biosecurity for farmers is not only for SCN but other pests including chemical resistant weed seeds in minimizing the transport of topsoil eg. truck, boots, machines, between any property. The risk of topsoil movement between properties on topsoil stripping or drainage tile equipment was often reduced with the knocking off soil from equipment tracks, etc. but should be rigorously and consistently managed to reduce the risk.

Based on the biosecurity observations, the following are recommended guidelines:

- a. Soil sample analysis for SCN preconstruction that has confirmed SCN results, should be repeated **post construction** on all non SCN tested properties
- b. Establish a thorough and rigorous SCN protocol for all equipment and all personnel to follow **prior** to the construction project through to the clean-up **completion**
- c. Familiarize all contractors before and after construction of an overall **pest protocol** that considers SCN and other pests including resistant weed seeds in minimizing the transport of topsoil between any property

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May 19 - P105 SCN impacted property with posted SCN protocol warning



May 23 - P98 wash station cleaning infected SCN topsoil from machinery adjacent to non SCN field



May 30 - P97 (non SCN) and P96 (SCN) boundary topsoil stripped toward SCN impacted property



Oct 23 - P98 (SCN) and P97 (non SCN) boundary topsoil returned and separation maintained

5.3 Topsoil Stripping

Agricultural production relies on the preservation of topsoil, or the organic layer, as it is distinct in characteristic from the subsoil layers below. The project team displayed considerable effort in the careful removal and handling of topsoil from agricultural properties. Several pieces of heavy equipment were employed to strip topsoil after an initial tractor discing. The typical sequence began with a road grader for the first cut to cleanly separate the undisturbed soil from the previously disturbed soil on the easement and establish the topsoil depth. Bulldozers (D6) primarily completed the topsoil stripping to the edge of the topsoil storage TLU on either side of the easement in separate undisturbed and disturbed piles. Where requested by the landowner, a straw mulch layer was spread over the topsoil before piling as a visual indicator for topsoil return. Additional topsoil stripping was done at wider TLU areas at road and stream crossings and staging areas primarily using excavators and piled separately. The final stripping and leveling across the easement was to be by a grader. This A/B soil

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horizon transition layer or 'seconds' containing much of the remaining topsoil was scraped shallow separating both sides into a small windrow positioned at the base of the topsoil pile. Individual foreman and operator would occasionally not separate these remaining undisturbed and disturbed soils or would use a bulldozer that is less accurate.

Conditions were assessed each day prior to topsoil stripping by the Soil Inspector at each location. Three separate field crews were supervised throughout the project involved in the topsoil stripping activity that each included several machines. This made it impossible for the qualified soil inspector to be present to monitor the removal of topsoil to the appropriate depth throughout the day. The contractor equipment operators and foremen appeared experienced in visually identifying the interface between the A and B soil horizons though the large contrast in soil type from the north to the south end of the easement required careful attention to the changing visual indicators. The involvement of several operators occasionally resulted in different results with the general tendency to remove more than what was required in causing mixing of the topsoil with some subsoil. Communication between the Soil Inspector, foremen and the ICM helped alleviate some operator uncertainties though any direction given was requested to be through the Soil Inspector.

Soils at the north end of the easement presented a distinct challenge as they were uniformly Brookston clay loam that was slow to dry. The decision to begin activities on these soils when lighter textured soils were more suitable resulted in delays in topsoil stripping as well as potentially damaging soils, particularly the Union Gas Dawn Station property that was stripped too wet. The Brookston soils also had a relatively shallow topsoil layer (<20cm) that was often mixed in with several cm of the underlying clayey B subsoil horizon of similar colour. In contrast, the silty loam highly productive soils of the south end of the easement had topsoil of 40-50cm depth. With consultation, it was decided to be stripped as much as could be stored with a minimum of 30cm.

Information of the measured topsoil depth for a field had not been collected ahead of stripping to assist the operators. Soil assessments conducted by the ICM confirmed the soils in the area of the new pipeline were undisturbed from construction and those in the area of previous construction were generally disturbed with C material subsoil, if not in the topsoil, in the underlying subsoil.

Based on topsoil stripping observations, the following are recommended guidelines:

- a. Identify topsoil depth for a field during the **preconstruction** soil sampling and testing activities to inform operators at the time of topsoil stripping
- b. Agricultural land topsoil stripping to be done with a qualified Soil Inspector or Independent Construction Monitor (ICM) **present to provide guidance and record variances in depth by property**
- c. Continue to **separate** topsoil into areas of previously disturbed soil (eg. mixing from previous construction) and undisturbed (native) soil piles off easement
- d. Topsoil stripping equipment to be initially done by **grader in undisturbed soil** area, bulldozer (D6 or smaller) in disturbed soil area; **backhoe in moist areas** and crossings TLU's
- e. After topsoil stripping, the **transition layer** of the remaining topsoil and intruded subsoil to be removed using **grader only**

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f. **Record using GPS georeference** the preconstruction grade of topsoil and the grade of subsoil after topsoil stripping; comparison can then be made to the reestablished subsoil and topsoil grade post construction, to help verify uniform topsoil depth and help ensure no restriction of the overland flow of water

Note: The OEB Environmental Guidelines suggest 'The topsoil depth and method of stripping should be determined after consultation with the landowner prior to construction'.



May 29 - P121 topsoil stripping initially by grader to proper depth separating undisturbed topsoil



June 9 - P109 grader has made first cuts and bulldozer continues to strip topsoil



May 24 - P120 topsoil stripping depth exceeded for Brookston clay topsoil where 20cm adequate



July 3 - P3 topsoil depths taken approached a half metre as in many parts of Dover Township

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June 2 - P110 topsoil stripping sequence of discing, grader centre cut, bulldozer pushing windrow



June 17 - P48 topsoil stripping piled onto straw mulch layer in TLU area along edge of easement



June 22 - P45 topsoil stripping with 12 heavy equipment machines and 3 tractor implements



May 23 - P54 completed topsoil stripping of RoW into two piles, each with seconds pile at base

5.4 Soil Piling

Topsoil was stored in piles in the storage TLU on either side of the easement within the designated easement boundary marked in regular 25-30m intervals with red painted wooden stakes. The storage area was not encroached by the discing prior to topsoil stripping so that the risk of an operator not distinguishing the loose material of the pile from loosened original topsoil surface underneath was minimized. A straw mulch layer was spread on the storage area surface before piling where the landowner requested it to provide a visual indicator when the topsoil pile was removed. However, experienced operators were adept at removing the piled topsoil from a firm undisturbed soil surface. The size of topsoil piles was somewhat dependent on the depth of stripping and width of the easement as where there was an additional TLU area. Occasionally, the larger sized piles would slightly exceed the easement boundary though clods of topsoil would be manually shoveled back or long armed excavators would be used to lift back the edge.

Protection of the topsoil piles was considered important during the initial period of construction. Wind erosion of the sandy materials in the year of construction was addressed with the spraying of a hydromulch over the entire topsoil pile that provided a thin mulch crust and opportunity for the applied

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annual ryegrass to get established before the weeds. Properties of medium textured soils and particularly with large storage piles in a TLU did pose additional risk of soil loss from water erosion off easement without any containment though there was little extent of this occurring. The A/B soil transition layer pile at the base of the topsoil piles acted as a containment to greatly reduce the movement and mixing of topsoil into the adjacent subsoil material on easement. However, large piles of extraneous subsoil containing heavy clay left overwinter next to topsoil piles did not have sufficient separation to prevent mixing. Topsoil piles were returned for the clayey soils of the north section in the year of construction negating the risk of loss overwinter. However, the majority of properties remained unprotected overwinter through the spring and much of the summer the year after construction. Topsoil piles were not protected from weed growth though some operators did spray herbicide to reduce the proliferation of weed seeds. Where they went unchecked, the weeds did provide an effective erosion protection measure.

During the wet conditions during the year of construction, water pumped off the easement would occasionally be sprayed onto topsoil piles. The amount of water and careful application caused minor erosion; however, the addition of sediment laden water from subsoil areas should be low.

Based on observations of soil piling, the following are recommended guidelines:

- a. Maintain **separation of topsoil by property** during stripping and separation of topsoil piles by property using a break in the windrow at property boundary
- b. Protect topsoil piles from wind and water erosion on prone soil textures with the application of a **spray tackifier (hydromulch) in both the year of and year after construction**
- c. Maintain **weed control** on topsoil piles using herbicide spray to avoid seed set, if requested by landowner



May 23 - P100 TLU topsoil stripping excessive with no separation of subsoil on topsoil pile



June 7 - P121 TLU area where topsoil from P122 woodlot stored on hay mulch layer

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July 6 - P24 topsoil that spilled over the back of pile off easement being pulled back onto pile



June 29 - P72 hydroseed spraying of topsoil piles in TLU of annual ryegrass on sandy soils



June 21 - P1 TLU topsoil pile hydroseeding well established for erosion protection



Aug 24 - P63 trench water sprayed onto topsoil piles causing minor eroding of soil

5.5 Pipeline (NPS16) Removal

The Panhandle Reinforcement Dawn to Dover Station Project included a lift and lay process whereby the existing NPS16 pipeline of the easement was to be removed to make way and be replaced by the installation of the NPS36 pipeline. With the completion of topsoil stripping on properties in the north half of the easement, the locating, digging and lifting out of the old 16in. pipeline from under a relatively shallow layer of subsoil began. Trenching using an excavator on either side of the pipe intercepted any drainage tile that was present. Tiles were capped closed and recorded with a georeferenced location. Lifted pipe was sheared into lengths and transferred by the excavator to TLU areas of road crossings for disposal.

Removal of the old pipe required careful management for short lengths in the south half of the easement where the protective coating was known to contain asbestos. The concern of possible contamination of material or liquids from the remaining 16in. pipe was assessed by Stantec environmental personnel to be insignificant. However, petroleum based protective coating fragments would detach with pipe snippings and handling. Fragments were not thoroughly picked up before being

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incorporated into the subsoil rooting zone from backfilling and grading equipment. Removal of pipe lengths took place over the year of construction with some delays lasting weeks. Placement of cut pieces was often on the edge of or on top of topsoil piles when grading subsoil or road crossings and pipe tie-ins required more room. Heavy equipment used to collect lengths caused some compaction in TLU's in wet conditions though mats were occasionally installed to reduce that risk.

Based on observations of the 16in. pipeline removal, the following are recommended guidelines:

- a. Cut pipe **adjacent** to and not on the trench to allow the collection of all fragments
- b. Collect pipe pieces efficiently and **avoid storage** in the vicinity of topsoil piles



June 26 - P66 georeferencing lateral tile intercepted during trenching of 16in. pipe line



June 9 - P124 trenching of 16in. pipeline and capping of tile drains (blue) as they are excavated



June 13 - P111 16in. pipe removed and snipped beside trench left for pickup and loading off site



June 15 - P110 loading 16in. pipe scrap in wet soil conditions without sufficient matting

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July 21 - P23 asbestos coated 16in. pipe encased in geotextile material for proper disposal



Aug 25 - P74 temporary storage of 16in. pipe, and subsoil, encroaching on topsoil seconds pile

5.6 Trenching

The method of trenching for the NPS36 pipeline was typically by excavator bucket but was also done in some areas using the ditching wheel trencher. An advantage of the ditcher was the excavation of a narrower trench with straighter walls generated less subsoil to pile and improved separation with topsoil in an often cramped easement. A disadvantage was the trench wall was often compromised and partially collapsed where soil conditions became less stable resulting in an excavator having to widen and clean out the trench. Each machine operator had an assigned crew member that regularly monitored the required trench depth along the easement to allow for 1.2m minimum cover by suspending a vertical tape measure. The length of open trench was usually limited to the distance between road crossings or stream crossings and a continuous length of welded pipe. Lowering-in and backfilling typically followed soon after trenching with weather permitting.

Separation of the excavated subsoil pile from the topsoil transition layer pile was often not possible along the easement due to the volume of soil and the confined work area. The use of geotextile fabric as a measure to separate materials was used in a very limited area of the easement where material from the deep trench could not be piled properly. A 1m separation was maintained where there was wider TLU areas. Where poor quality subsoil comprised of 'blue' clay was excavated from deep trench areas, often at road or stream crossings, this extraneous material was either directly loaded onto a dump truck for temporary relocation on the easement or taken off site, but sometimes was dumped on to the back side of the subsoil pile. Separating extraneous material from trench subsoil and from topsoil seconds pile was an ongoing challenge that required careful management in the areas of many of the 43 stream crossings and 26 road crossings. A significant amount of extraneous material was piled or removed from the easement. In general, the extent of easement width and TLU areas appeared to accommodate the trenching soil piles and the required construction activities, with the use of good management.

The large extent of relatively level and intensively managed agricultural land along the easement meant

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several high density drainage tile systems were intercepted during trenching. Tile crossing the easement were marked with spray painting at the trench edge and wooden stakes, and were capped. Pieces of severed tile from the trenching were mixed into the subsoil pile of which visible pieces on the surface were later removed and cleaned up before backfilling. Tile mixing with the subsoil pile was greatly increased with the ditcher wheel machine that severed tile into several pieces mixing them throughout the subsoil pile unable to be picked out.

Based on observations of subsoil trenching, the following are recommended guidelines:

- a. Trenching of subsoil material from **upper** trench be consistently kept together in pile area closer to topsoil pile to ensure it will be **backfilled last**
- b. Storage of extraneous subsoil material from deep trench be **well separated** from topsoil avoiding lengthy storage periods, possible erosion and mixing of materials
- c. Avoid using the ditcher wheel trencher in lighter textured soil prone to wetting up to avoid **slumping** and additional trench wall excavation and additional subsoil storage
- d. Avoid using the ditcher wheel trencher in crossing closely spaced **systematic tile** systems that results in tile fragments dispersed throughout subsoil pile and trench backfill
- e. Drainage tile intercepted by trenching **should be removed** from subsoil pile whenever possible prior to backfilling



July 24 - P114 ditcher wheel making narrow trench and smaller subsoil pile, good separation



Aug 25 - P47 backhoe trenching separating heavy clay from deep trench into rear subsoil pile



Aug 15 - P79 trench deepened after sidewall collapse of coarser soil material



Aug 24 - P52 trench wall and pile size comparison of wheel trencher (foreground) and excavator bucket

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July 22 P121 some spoil materials occasionally piled onto topsoil seconds



July 25 - P113 insufficient space to pile subsoil requiring geotextile separation with topsoil pile



Aug 2 - P98 massive structured 'blue' clay subsoil exposed at 2.5m depth of trench`



Aug 1 - P118 blue clay piled and signed separately to be hauled off site



Aug 23 - P89 typical extent of open trench before pipe lowering-in operations and backfilling



Sept 30 - P8 rock truck dumping excavated material on RoW from road and drain crossing

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5.7 Backfilling

After an assembled length of the NPS36 pipeline was lowered-in between roads or stream crossings, backfilling of the trench would follow typically within a couple days. Some of the piled subsoil was returned initially with an excavator to cover and fill around the pipe using moist to dry crumbled material. Where heavy clay subsoils had dried in hard clumps, a shaker box was sometimes used to cover the pipe. Crumbly cover material was often taken from the pile centre, however, consisting of better quality subsoil from the upper trench avoiding the clumpy or higher clay material on the sides of the pile that originated from the deeper trench. As a result, mixing of better quality B soil horizon and the poorer quality C soil horizon was inevitable. The remaining subsoil was backfilled by either being bucketed back or pushed back with a bulldozer. Depending on the soil type, the subsoil mixing and inversion in some locations resulted in poorly draining low fertility clay soils being placed at the surface of the trench. With the return of topsoil overtop, the soil material would have an impact on infiltration, compaction risk and potential crop productivity. The risk of mixing contrasting subsoils with depth was greater near road and stream crossings where deep excavation was required. This risk was not recognized by some contractor personnel or inspectors as backfilling was not always monitored closely. As an example, related observations of the ICM required the removal of clay subsoil at the trench surface near the road crossing of P61. Removal of significant amounts of heavy clay spoil material off site resulted in a deficiency of suitable subsoil backfill in isolated places.

Remnants of drainage tile in the subsoil pile were seldom picked from the subsoil pile during trenching but were sometimes removed during backfilling but were well picked from the trench surface area after backfilling. Significant amounts of tile pieces were therefore backfilled with the subsoil at some properties particularly with closely spaced systematic tile systems. The impact on subsequent tiling and drainage performance is unknown. Refuse material was not added to subsoil backfilling operations though a few used sand bags were observed.

The method and degree of compaction of backfilled material varied along the easement. Backfilling of the trench continued from the initial covering of the pipe to within a couple feet of the subsoil surface. Bulldozers typically then trafficked over the material as they continued to push the additional subsoil until the trench surface was level. Graders were also used to traffic the backfill within a couple feet of the surface, more often in heavier textured soils, though a portion of the trench width could not be compacted with their tires with the unevenness and width of trench. The amount of compaction applied, whether subsoil was pushed into the trench to below or at grade before being driven on, or whether it was by a tracked machine or grader tires in different soil and moisture conditions, raises the concern of excess compaction as well as for potential subsidence. The method of backfilling may have also influenced the amount of excess material that remained once the trench was levelled. A considerable amount of extraneous subsoil remained after backfilling.

Additional stockpiling of loads of gravel throughout the easement used at road and stream crossings to backfill the trench and main tile repair was also a potential concern. The risk of mixing with soil occurred

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with poor placement on to the edge of a topsoil pile in one case but was of greater concern for the mixing with subsoil by subsequent traffic and insufficient clean-up. It was necessary to scrape and remove the layer of subsoil and gravel mixture to remove the imported stone. Maintaining a stone free soil was a direct economic concern for one carrot producer. Separation material such as geotextile fabric to place under a pile was not a favoured practice over diligent removal, though this fabric was used for the road access and stream crossing (~70) ramps along the easement.

Landowners were asked in the preconstruction survey of their preference for keeping excess soil material of which more than forty said yes. The LRA's arranged for the subsoil delivery off site to the satisfaction of landowners. However, extraneous spoil piles remained on the easement for an extended period including overwinter on some properties. Decompaction was not completed around the piles until removed. Once backfilling was completed and spoil material was removed, the subsoil surface was graded level that matched the easement from side to side. There was no mound or provision for trench subsidence of subsoil.

Based on observations of trench backfilling, the following are recommended guidelines:

- a. Backfill sequence of trench soil material **to be monitored** to ensure pipe cover using crumbled material followed by deeper trench subsoil followed by upper trench subsoil
- b. Compaction of backfilled soil material to be by a method that applies the standard density on a thorough and **consistent** manner in depth and width of the trench



Aug 3 - P97 trench backfill using soft pile centre material first, deep heavy clay subsoil near top



July 31 - P126 backfill over pipe using grinder bucket to break up hard clay soil clumps

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Sept 2 - P54 backfill of deep bell hole generally dry but wet mixed soil materials placed on top



Sept 12 - P61 tie-in trench backfilled to top with deep trench clay vs. original sandy loam subsoil



July 31 - P126 compacting subsoil material backfilled in trench using grader tires and bulldozer passes



Aug 12 - P103 clean-up of plastic tile drain from subsoil during backfilling operations



Sept 7 - P61 gravel stockpiled over topsoil seconds pile and onto topsoil pile



Oct 5 - P82 gravel remaining from stockpile graded out and mixed into subsoil surface

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5.8 Wet Soil Shutdown

Wet soil shutdown protocols are required during pipeline construction to prevent an adverse effect on soils during wet soil conditions. Rain gauges were located in 5 locations along the easement to help assess the daily soil condition by the Union Gas soil inspector. Rainfall was provided to the ICM upon request at the daily construction meeting. After a rainfall, the assessment of the Soil Inspector helped determine the extent and location of work shutdown decided by the Construction Superintendent. The extent of a shutdown, ie. full or partial shutdown, considered a number of factors including the conditions, amount of rainfall, soil type and different construction requirements. The year of construction was wetter than normal with a reported total number of partial or full shut down days affecting construction plans on the agricultural lands of 73 days. Inspection of suitable conditions was the responsibility of the Soil Inspector that removed any interpretation by the contractor foremen to manage personnel and subcontractor traffic. Weather forecast information including radar that was available in real time was always consulted by inspectors and the contractor to be aware of pending significant rainfall.

A number of incidents, however, were observed by the ICM despite the general acceptance of the wet soil shutdown policy. Rubber tired vehicle traffic such as pickup trucks occasionally left tracks that were potentially damaging to agricultural soils. Damage could have been reduced in many cases by avoiding standing water, a protocol that was generally accepted by most. A rigorous and diligent program was followed in removing standing water from the easement when it readily accumulated after rainfall. Trash pumps and hoses were used to draw water down the easement to roadside ditches to empty water and sediment through filter bags. The effort to remove water from the easement undoubtedly helped to lessen the infiltration, increase the drying potential and reduce the risk of subsoil compaction from subsequent traffic needs. The use of light all-terrain vehicles were relied on in moving equipment to facilitate the removal of standing water that inevitably caused some rutting; however, the benefit of minimal ATV traffic for this purpose was reasonable.

Subcontractor traffic (eg. fuel truck, hydro-vac, pipe scrap truck) occasionally caused wet soil damage that could have been avoided in some cases with the earlier use of the mitigation measure of wood construction mats. Extensive use of wood construction mats was employed in staging areas of large pipe boring activities and the work area along the easement in the heavier textures soils (4km lane) near the north end to reduce compaction. However, heavy equipment work from the mats through an extended period of wet saturated conditions did not represent a sufficient mitigation measure in preventing an adverse effect on soils. Non-compliance with the wet soil shutdown policy occurred most often during construction priorities, eg. water crossings, and activities later in the fall leading up to the pipeline in-service deadline date.

Working in saturated subsoils by heavy equipment when conditions were wet was occasionally done. Scraping the thin layer of wet subsoil to mix with drier material below to hasten drying was not a common practice but did occur. In TLU areas where pipeline tie-in activities were required, tracked

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machinery mixed wet subsoil of different depths; as well bulldozers were used to remove wet layers of subsoil to permit various kinds of traffic to complete pipe work. Contractor personnel were made more aware by the ICM of the risk of subsoil damage and the limitation of decompaction steps to remediate compaction. By not allowing the soil to dry, the natural structure and drainage capability were likely affected by heavy destructive forces causing detachment and smearing of soil particles. These separated particles in turn seal pores, increase the future risk of the subsoil to compaction and reduced the soils ability to infiltrate water.

Based on observations of wet soil shutdown, the following are recommended guidelines:

- a. Determining wet soil shutdown conditions prior to daily construction by the Construction Superintendent to consider input from a **qualified Soil Inspector**
- b. Traffic, including pickup traffic, on easement throughout wet soil conditions to be avoided and restricted to **required** construction areas
- c. Prioritizing pipe work during wet soil shutdown conditions should **implement management practices** (eg. construction mats) to minimize the area and depth of soil damage
- d. Raise awareness of wet soil shutdown and risk of damage of wet soils by Union Gas and Contractor **to Subcontractors**
- e. Pumping ponded water off easement should continue to be a **high priority** to avoid causing saturated soil conditions that may lead to lengthy dry down time and additional soil compaction risk
- f. Drying of easement subsoils not to be aided by scraping or **blading of wet soil** layer, of which removing wet layer should only be done if there are **required** construction areas to access
- g. Delay soil work until June, particularly on clayey soils, and under dry conditions

Note: The OEB Environmental Guidelines suggest that the wet weather shut down policy is to include 'During wet weather conditions, contact with topsoil should be avoided and a total restriction placed on all rubber tired vehicles and equipment traveling on the ROW. If, due to delays, construction must continue under wet soil conditions to meet an in-service date, terms and conditions must be discussed with the landowner.'



May 4 - P1 pipe work traffic and activities in TLU area in wet soil conditions



May 15 - P128 topsoil stripping using ten heavy machines done too early on moist clayey subsoils

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June 23 - P111 ponded water and tracks made by an Argo ATV transporting pump equipment



June 27 - P125 wood mat 4km lane covered in mud lying on wet clay soils and ponded water



July 15 - P124 wood mats covered in mud and floating, ponded water and wet soil conditions



Aug 29 - P120 standing water on compacted subsoil after rain after wood mat lane removal



July 25 - P107 saturated subsoil pushed aside by bulldozer before rutted by fuel truck traffic



Aug 18 - P96 wet soils and ruts off the access ramp from hydrovac truck before mats installed

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Sept 20 - P38 impact on subsoil from stream crossing activities under wet soil conditions



Oct 16 - P54 pipe work activity disturbance of drier subsoil after saturated subsoil pushed off



Aug 17 - P33 random pickup truck traffic in wet soil and through standing water



Sept 14 - P8 pickup truck tracks in wet saturated soil



Nov 14 - P27 wet soil tracks from gator vehicle traffic during final construction activities



Aug 1/18 - P56 pickup turnaround tracks on wet soil just beyond mat lane

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5.9 Topsoil Replacement and Compaction Removal

5.9.1 Year of Construction Restoration

The soil restoration process as part of the clean-up phase began in the north end around the middle of September 2017 as mainline pipeline installation began winding down toward the south end. Conditions of the clayey subsoils of the north end remained moist to wet through much of the summer until a dry hot September period. Surface conditions initially were dry for grading level; however, decompaction of the moist subsurface by fracturing and lifting was not possible at many sites as tool shanks smeared clayey soils.

The restoration steps of subsoil decompaction, topsoil replacement and spreading continued into October under challenging conditions with the completion of all the clay loam soils of the north end (34 properties), with one landowner property exception. The landowner indicated a concern of subsidence of the trench overwinter and the unlikely restoration of topsoil and installation of drainage tile under suitable conditions in the fall and requested further work be not done until dry summer conditions of the following year. Only one other landowner along the easement requested that restoration work of the subsoil be postponed and topsoil overwintered. Suitable conditions in the fall on properties further south in areas of sandy soils allowed 34 properties to be graded level. Of these, only 6 properties had topsoil returned with all but one having partial subsoil decompaction completed in the fall. The landowner agreed to have the remaining subsoil surface and topsoil decompacted using a paratill the year after construction. An additional restoration activity was required in removing the extensive area of wood construction mats used at the Hwy 40 boring site. The amount of activity and heavy machinery involved degraded and splintered the mats embedding them into the surface of the subsoil requiring significant clean-up effort into the next year.

During the clean-up phase, wet and excessively moist soil conditions were well considered by the Soil Inspector in determining suitable conditions to reduce further subsoil and topsoil impacts after construction. As conditions in the fall wet up with lower temperatures and precipitation, effective decompaction of the compacted subsoil was not possible. Under these conditions, subsoils typically cannot drain as well as topsoil to permit the critical steps of decompaction. Despite the initial request of almost all landowners and initial belief of Union Gas that lands would be restored in the year of construction, the timing of the restoration activity, the amount of work required and resources available, and the soil conditions were not suitable for proper soil restoration of all properties within the fall period. There were 78 properties (66%) that remained with overwintered topsoil to be restored the year after construction.

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Sept 12 - P124 clay subsoil chiseled in wet areas intended to promote drying in good weather



Sept 18 - P124 subsoil 'decompaction' in dry surface and moist clay subsurface conditions



Sept 24 - P121 a) grader pulling ripper teeth decompacting subsoil to 30cm



b) excavators pulling topsoil piles onto decompacted and levelled subsoil



c) bulldozer spreading and grading topsoil



d) cultivator leveling topsoil (Sept 26)

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e) Sept 29 - P121 paratyl plow decompacting topsoil to 30cm depth



Oct 5 - P106 grader creating topsoil crown over trenchline



Oct 5 - P79 fenced off from fall soil restoration, several other sandy subsoils decompacted



Oct 23 - P56 clean-up of bore site where broken construction wood mat pieces mixed into subsoil

5.9.2 Year after Construction Restoration

Restoration of agricultural soils continued the year after construction beginning in June 2018. The one month delay for soil work from the intended starting date of the construction year of May 1 was much more reasonable in considering acceptable conditions, particularly for heavy textured soils. Due to the flat landscape along the easement, soil erosion on the restored and non-restored lands was not a significant issue overwinter. However, topsoil piles not protected with a cover suffered some water and wind erosion losses onto the adjacent easement and adjacent field. Large piles of the TLU and areas of deep topsoil had greater sediment movement. Extraneous spoil piles left overwinter next to topsoil piles with adequate separation in the fall posed a risk of slumping and mixing of materials with erosion losses without physical containment. The status of soil restoration activities by property was developed by the Union Gas Soil Inspector that was updated and forwarded to the ICM through the season. Outstanding soil restoration activities included the decompaction of subsoil on most properties, the return of topsoil with grading and topsoil importation for subsidence, cover crop establishment, tile repair and installation. Properties with topsoil returned in the fall that did not receive further restoration and

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signed off and released them totaled 18 (15% of agricultural properties) with the remaining 22 properties receiving final restoration including topsoil addition, level grading and decompaction the year after construction.

Throughout the clean-up effort, the methods and soil conditions were generally suitable to meet the conditions of the LOU that would not adversely affect soils. Subsoil and topsoil decompaction was completed by October. However, several observations were noted that increased the risk of a soils function and productivity being affected when compared to preconstruction conditions:

- Subsoil decompaction was most often done with multiple parallel passes but could have been effectively achieved with fewer perpendicular and **angled** passes
- Subsoil decompaction was sometimes **insufficient** with the grader ripper when it could not penetrate beyond 15cm; the D6 bulldozer ripper with potential to penetrate below the 30cm goal was effective on the **heavily compacted travel lane** and should also be used where necessary on the RoW between and beside the pipelines to get adequate decompaction
- Subsoil decompaction should not be completed until close to when topsoil will be returned to avoid wetting up soils that possibly **delay** their suitability and risk deeper compaction
- Topsoil pulling by operators should be **square** to the pile as much as possible rather than pushing on an angle to retain a soils origin
- Topsoil spreading out from the previously mixed pile occasionally **exceeded** the stake line boundary increasing the possibility of pushing mixed topsoil into the unmixed topsoil
- Spreading and leveling **moist** topsoil with bulldozers immediately after being pulled risks further compaction unless allowed to dry somewhat
- Topsoil **depth monitoring** was not done but should be completed by a qualified soil specialist ensuring uniformity and a minimum reasonable depth
- Topsoil decompaction was thorough from edge to edge of RoW and TLU areas achieving good penetration though multiple parallel passes were completed instead of including an **angled** pass to increase the effectiveness of deep decompaction
- Landowners with topsoil restored in the fall the year of construction that planted crops the following spring without the completion of timely **year 2 soil restoration and tiling** had areas of poor drainage and crop loss; soils disturbed from construction are susceptible to further compaction until they dry out and reestablish some of their natural structure and drainage
- Imported topsoil should be **screened**, as one property received loads of soil containing stone, wood and debris that once spread was impractical to pick thoroughly
- Traffic to be **avoided on all restored topsoil** and restricted to light vehicles if necessary
- Cover crop be established as soon as is reasonable once topsoil is **returned**; winter wheat was established for properties returned the year of construction that helped to restore soils but **no cover was established** by Union Gas the year after construction that also allowed weeds to be reestablished where mowing was too late or not done

Note: The OEB Environmental Guidelines suggest: 'It is possible that arrangements requested by the landowner can result in poor quality restoration and problems in subsequent years, and may not be the

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preferred approach. On the other hand, the contractor may not be as familiar with the specific limitations associated with the soil type or specified equipment for restoration. It is recommended that a professional agronomist/ agrologist be retained to review the proposed restoration technique and its application with the contractor and the landowner, in order to ensure that optimal results are achieved.'



June 5 - P8 mixing of topsoil and extraneous subsoil piles overwinter with no separation



June 26 - P61 large topsoil pile in TLU has eroded sediment without containment into adjacent field



June 18 - P69 pumping standing water off RoW including into main tile after filter bag



July 24 - P94 ponded water beside trench crown of fall restored and released property



June 15 - P5 travel area of RoW dusty, beaten subsoil from dump truck traffic removing subsoil



July 7 - P60 subsoil decompaction ripping and leveling under very dry good conditions

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July 3 - P5 initial subsoil decompaction to 15cm inadequate due to shallow systematic field tile



July 7 - P74 topsoil decompaction to 40cm excellent after paratill plow passes



July 19 - P124 topsoil addition to low areas after disc and grader worked and levelled dry surface



Aug 8 - P99 dumping unscreened topsoil at field edge and temporary piling beside low wet soil



July 16 - P26 driving lane used for bridge removal compacting topsoil that had been returned



Aug 8 - P6 good topsoil decompaction using 3 implement depths and initial weed tillage

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Sept 24 - P56 access lane mats and geotextile fabric lifting cleanly adjacent to Little Bear Creek



Oct 26 - P55 partial decompaction of access laneway to easement using only parallel passes

5.10 Drainage Tiling

Information of a landowner's drainage tiling system in a field was collected the year before construction in 2016. A tile plan was developed with the Union Gas tile inspector considering the existing tile to determine the need for preconstruction tiling. Preconstruction tiling was completed in the winter of 2017 in unfrozen conditions prior to pipeline construction. Header tiles were installed parallel to and upslope of the easement to intercept lateral tiles and direct flow to main tiles that were installed if necessary, to direct flow across the easement.

The importance and prevalence of tile drainage systems along the easement was recognized during construction. Lateral tiles were severed during the NPS16 trenching and were marked and capped and main tiles were georeferenced on both sides of the trench. Trenching for the NPS36 pipeline followed the same process though main tiles were not always temporarily repaired across the easement right away until after the NPS36 trenching and pipeline installation; however, all main tiles were repaired prior to wetting up and the winter season.

Tile drainage installation down the easement began mid July 2018 by a licensed drainage consultant on suitably dry sandy textured soils using a tile plow. A minimum of 4 parallel tile runs were installed located between the east edge and the existing NPS20 of the easement, between the NPS20 and newly installed NPS36, and two in the work space between the NPS36 and the west edge of the easement. Additional lines were installed in wider TLU and easement areas. A small number of landowners arranged for other drainage tilers or completed the tiling themselves. Tiling continued throughout the easement until soils wet up and conditions were too soft for vehicle traffic in October. Tile installation was then incomplete and postponed indefinitely for approximately 10 landowners.

Biosecurity and wet soil shut down policies were adhered to for the selected drainage consultant with a Union Gas tile inspector overseeing their tiling activities and a Union Gas utility inspector on site daily. Traffic by pickup trucks on the recently restored topsoil was also limited to an inspector for safety reasons. However, for landowner arrangements with other tiling companies, traffic was not as controlled.

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Some of the impact on easement lands from tiling included the confined recompaction of topsoil from vehicle traffic, mixing of topsoil and subsoil during excavation of laterals, and the disturbance of soils in early to mid-October when conditions were wet. Where lateral tiles had been severed between the NPS36 trench to the header tile along the east boundary of the easement, the installation of tiles by the tile plow and use of a rubber tired backhoe in poorly draining soils for a small number of properties resulted in severe rutting through the topsoil and mixing into the subsoil. Work resumed near the end of the month but wet weather subsequently suspended tiling.

Soil uplifted from the tile plow trench was for the most part left to reconsolidate naturally. Displaced sandy soils were initially scraped back over the trench. High mounding of trenched soil was observed in soft sandy soils that were sometimes excessive and prohibitive for weed control and cover crop planting. Several property landowners elected to level and till soils soon after installation increasing the risk of mixing topsoil with uplifted subsoil. The result is a depleting of the topsoil productivity.

Based on observations of drainage tiling, the following are recommended guidelines:

- Avoid driving pickups on topsoil and utilize light vehicles that maintain an established **driving lane** located over a planned drainage tile run
- During trenching, any **severed field drainage tile** is to be staked, identified, capped and location recorded using GPS georeferencing
- Complete tiling activities in dry conditions of summer and early fall and use **tracked** equipment when necessary eg. poorly drained soils from damaged tile; to avoid tile installation in **wet conditions** when damage to topsoil will negate restoration
- Where a main tile is intercepted that crosses the easement, **maintain a temporary connection** until permanently repaired to avoid possible wetting up of easement soil
- Soil uplifted from tile drainage to be allowed to **reconsolidate naturally overwinter** and not be pushed back onto tile trench risking tile damage and greater topsoil and subsoil mixing
- Repair of tile should be done upon completion of topsoil restoration in **dry** conditions to allow further restoration of topsoil and planting of a cover crop

Note: The OEB Environmental Guidelines suggest that for tiled land, ‘...mitigation plans must be developed and implemented prior to construction. The plans should be designed to maintain subsurface drainage during and after pipeline construction.’

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July 21/17 - P9 typical repair of plastic tile drain main completed during backfilling



Sept 23/17 -P47 main drainage tile repair in progress under predominantly dry conditions



July 23 - P75 subsoil topsoil mixing from backhoe trenching used in locating lateral tiles



Aug 23 - P81 uneven surface and soil mounds left after tiling limiting tillage and weed control



Sept 19 - P107 breakage of subsoil into columnar structure indicative of good installation conditions



Sept 19 - P106 smearing effect affecting drainage when tile installed into moist, plastic clayey soil

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Oct 9 - P34 tile plow soil disturbance where tiles cutoff from trench to preconstruction header tile



Oct 11 - P23 tile plow installation in very moist soil conditions causing severe rutting and mixing



Oct 24 - P55 replacement of flattened main tiles with hard tile sections across easement



Oct 26 - P56 locating lateral tile, cutting and inserting drainage tile cap

5.11 Communication

The ICM reported on construction activities on agricultural lands and concerns with Daily and Weekly Reports throughout the project. Observations of the ICM were discussed over the phone occasionally with the Union Gas Construction Superintendent and the CAEPLA representative in identifying areas that required improvement. Recognition of concerns raised in Daily Reports to the Construction Superintendent also relied on communication with the Union Gas construction team on site to consider its importance. Direction of the contractor or subcontractors by the ICM was not authorized and communication of the ICM with landowners was to be only when requested by the landowners.

Landowner construction concerns prior to, during and after construction were not formally disclosed to the ICM, including the preconstruction survey, as the LRA's were the projects point of contact. Involvement of the ICM from the preliminary steps with landowners could have provided additional agricultural perspective to the construction team for better informed decision making. Knowledge of agricultural and land protection issues would have supplemented information available for the LRA in discussing pros and cons and the recommendation of sound practices with landowners.

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The communication between the ICM and landowners during the 2018 clean-up phase the year after construction was limited to informal on site discussion as communication with landowners was only to be through the LRA as the first point of contact. Discussions of clean-up plans to address problems with the agricultural lands were reviewed between Union Gas, the LRA, the Soil Inspector but not the ICM. Based on the observations of communication, the following are recommended guidelines:

- a. Communication of the Joint Committee to **include the ICM** with written and verbal exchange to be at regular intervals or as requested
- b. Landowner to be made aware of **ICM role** during preconstruction interview and the availability of ICM for consultation, in addition to the LRA during construction
- c. If LRA is the primary contact for landowners, familiarity with agricultural challenges and farming concerns is important; **daily communication updates** to be exchanged with ICM
- d. On-site meeting request by landowner to discuss construction practices to be arranged with the appropriate Union Gas contact **and ICM**

6. Conclusion

Members of the construction team recognized that pipeline construction on agricultural lands required a set of practices and due diligence that protected the soil and the landowner's concerns. The LOU was adhered to though circumstance and insufficient decision making did not permit aspects to be fully compliant. Landowners were modestly engaged with correcting impacts of construction to their properties particularly during clean-up and restoration but actions were followed through to amend situations as they arose. Construction during the dry summer and early fall was when the least impact to soil was most likely to occur. Timing of construction and the condition of each individual property for conducting a practice were the critical factors in managing the potential impact from construction. Improvements in practices were identified in the Final Report though, that could be incorporated to better protect the soil resource. Union Gas showed a commitment to undertake good practices but implementation at the ground level was given a lower priority around construction deadlines. Significant impacts to sensitive lands and potentially to the off easement environment were seldom a consequence. The shared goal was always to return land to close to preconstruction conditions quickly; however, the realistic timeframe to complete pipeline construction of this scale and restore lands with minimal impact should consider that restoration under suitable conditions will be best completed the year after construction.

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Appendix A: Construction Monitor Role Description

CONSTRUCTION MONITOR ROLE DESCRIPTION

Accountability

The Construction Monitor (Monitor) is accountable to and reports directly to the Construction Monitor Committee (Committee).

Scope

The Monitor shall observe and report on pipeline construction activities for the Union Gas Limited (Union) 2017 Panhandle Project. Observation shall be limited to impacts of construction on the land, including right-of-way preparation, trenching, backfill, and clean-up operations as well as Wet Soil Shutdown (WSS) events. The Monitor shall review construction activities for compliance with the Ontario Energy Board (OEB) Conditions of Approval, Letters of Understanding (LOU) agreed to between Landowners and Union Gas, and all specific construction commitments included in Union's construction contract.

The WSS practice is defined in the LOU. The Monitor does not have the authority to decide when WSS is required. When requested by an authorized representative of the Joint Committee (composed of landowner and Union Gas representatives), the Monitor shall render an opinion of whether or not construction work took place in wet soil conditions as defined in the LOU.

The Monitor shall limit contact with landowners to situations where a specific request is made by the landowner or the Committee. When a request is received, the Monitor shall respond within 24 hours. The Monitor shall be present on the construction work site and will be subject to the safety program established by the pipeline contractor including safety training and qualification prior to entering the work site.

Deliverables

Reports shall be completed in accordance with the sample documents attached hereto. Such reports shall not be subjected to review or editing by any member of the Committee or their sponsor organizations prior to submission. Daily reports shall be submitted simultaneously and directly to the CAEPLA-PLC and Union Gas Committee members. Weekly reports shall be submitted simultaneously and directly to all members of the Committee. A final report generally summarizing all reports shall be provided at the end of the contract term. The report shall contain, at a minimum, recommendations in respect to the following:

- Communications with landowners and the Committee.
- Potential construction activity improvements.
- Reporting requirements.

The Monitor shall verbally report any violations of conditions, landowner agreements or specifications immediately to the Union Gas inspector on site and in writing to the Chief Inspector and to members of

Union Gas Limited Panhandle NPS36 Pipeline Project

the Committee as soon as possible.

Qualifications

- Graduate of a recognized Community College or University with a background in environmental sciences or engineering or technology.
- Experience with heavy construction, preferably in pipeline construction.
- Knowledge and experience with soil characteristics and agricultural practices.
- Proven ability to understand and interpret technical and legal specifications and permits. The Panhandle project will require familiarity with:
 - The OEB Conditions of Approval
 - Contents of the construction contract including:
 - General Conditions of the Contract
 - Construction Specifications
 - Construction Drawings
 - Special Landowner Requirements
 - Environmental Permits and the Environmental Construction Plan
 - Environmental Assessment
- Excellent communications skills and interpersonal skills exhibiting tact and diplomacy.
- Ability to provide independent judgement so that an unbiased third party viewpoint is maintained.

Equipment

The Monitor shall have the following equipment available and operable at all times:

- Pickup truck with four wheel drive capability.
- Insurance in accordance with Section 17 of the Master Services Agreement
- Laptop computer and printer.
- Digital still image and video capture equipment. Film still image equipment.
- Cell phone with message service.
- Personal protection safety equipment (hard hat, safety boots, eye protection, safety vest).

Term and Hours

Term: May 1, 2017 – November 30, 2017

Hours: As required, 10 hours per day, 6 days per week.

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Appendix B: Reference Documents

Ontario Energy Board Decision and Order Union Gas Limited EB-2016-0186, February 23, 2017

- Schedule A, Project Map
- Schedule B, Area Map
- Appendix C, Conditions of Approval
- Appendix D, Draft Accounting Order

Union Gas Limited and Landowner Letter of Understanding (LOU) Panhandle Reinforcement-Dawn to Dover Station, December 7, 2016

Union Gas, Panhandle Reinforcement Project 2017 Construction, Pipeline Construction Alignment (drawings 2016-10-31)

Union Gas, Major Projects' Construction Specifications, Pipeline Construction (2016-04)

Stantec Consulting Ltd., Panhandle Reinforcement Project: Environmental Report, FINAL REPORT, June 2, 2016

Ontario Energy Board, 2016. Environmental guidelines for the location, construction and operation of hydrocarbon pipelines and facilities in Ontario. 7th Edition,

Union Gas Limited Panhandle NPS 36 Pipeline, Construction Monitor Daily Report

Union Gas Limited Panhandle NPS 36 Pipeline, Construction Monitor Weekly Report

Union Gas, Panhandle Reinforcement 2017 Landowner Line List (Ver. 2017-05-31)

Union Gas, Panhandle Reinforcement 2017 Landowner Line List Clean-Up (Ver. 2017-09-18)

Union Gas Panhandle - Daily Work Schedule (DAILY Lookahead-yyyy-mm-ddd.xlsx)

Union Gas Panhandle - Daily Rainfall (Rain_YYYY_NPS36_Pan.xlsx)

Union Gas Panhandle - 2018 Clean-up Chart (2017Pan_2018 Clean-up_YYYYMMDD_EJM.xlsx)

CAEPLA correspondence to PLC Landowner, August 10, 2017

Union Gas Limited Panhandle Reinforcement Project Post Construction Report December 2017

ATTACHMENT 15



Delivered by Email

Fax 519.436.5353

February 10, 2016

GAPLO-Union
C/o Ian Goudy
22297 Wonderland Road, N.
R.R. #1
Ilderton, ON N0M 2A0

Dear Mr. Goudy:

**Re: Letter of Endorsement
Renewal-Pipeline System Integrity Dig Agreement**

LETTER OF ENDORSEMENT

by and between Union Gas Limited ("Union") and GAPLO-Union ("GAPLO")

Union and GAPLO agree that the form of Pipeline System Integrity Dig Agreement (the "Agreement") attached to this letter is the form that will be utilized for all Integrity Digs undertaken by Union along the Dawn-Parkway Pipeline System up to December 31, 2020.

This Agreement is endorsed based upon the following changes:

- 1) Term-5 year (2016 to 2020)
- 2) Construction Season is from June 1st to October 15th
- 3) Added wording in Paragraph (a), Page 1 to cover payment if 2nd year
- 4) Land Use Value changed to Land Use Component-\$13,500.00/acre across system
- 5) One year crop loss is \$960.00/acre
- 6) Disturbance Payment is \$5,880.00/acre

Note: The interest rate required and utilized in Addendum C-3 is to be approved by both Union and GAPLO.

Agreed to and accepted as of this 22nd day of February, 2016.

Signed on behalf of Union

Signed on behalf of GAPLO

Mervyn R. Weishar
Senior Land Specialist
Lands Department

Ian Goudy



2016-2020
 Dig No.: Egremont Drive
 Landowner(s) Owner: C&R Cattle Co. Inc

For Internal Use Only
Lands File No.: T2601-184
Cheque No.:
Project: NPS 26 Class Replacement
Acct No.:

PIPELINE SYSTEM INTEGRITY DIG AGREEMENT

In consideration of the sum of One Dollar (\$1.00) of lawful money of Canada now paid by the Company to the Owner (the receipt of which is hereby acknowledged) and the further rents, covenants and agreements hereinafter reserved and contained the parties hereby agree as follows:

This Agreement is between Union Gas Limited (the "Company") and; C&R Cattle Co. Inc. ("Owner"), owner of PIN: 09658-0045; Legal description: Being Part of the PIN: N 1/2 LT 8, CON 7 ; S/T 108373,198784,838454 ; MIDDLESEX CENTRE TWP/LOBO TWP; S/T 198783 DESC AMENDED BY L.BENEDICT 98/02/18/; S/T EASE OVER PARTS 1 & 2, PLAN 33R-16666 AS IN ER470464

The Owner hereby grants to the Company, its servants, agents, employees, contractors and sub-contractors and those engaged in its and their business, the right on foot and/or with vehicles, supplies, machinery and equipment at any time and from time to time during the term of this Agreement to enter upon, use and occupy a parcel of land (the "said lands") as designated on the sketch attached hereto and made a part hereof the said lands providing access to or being immediately adjacent to and abutting the lands subject to an existing easement agreement in favour of the Company and a dig site within the lands subject to the Company's easement, and mutually agreed to prior to entry for the purpose of exposing the Company's gas transmission pipeline to enable inspection, repair, replacement, reconstruction or maintenance of the existing NPS _____diameter gas transmission pipeline, and appurtenances on the afore-mentioned easement including, without limiting the generality of the foregoing, the right to make temporary openings in any fence along or across the said lands and to remove any other object therein or thereon interfering with the free and full enjoyment of the right hereby granted and further including the right of surveying and placing, storing, levelling and removing earth, dirt, fill stone, debris of all kinds, pipe, supplies, equipment, vehicles and machinery and of movement of vehicles, machinery and equipment of all kinds. It is acknowledged that the access lands will be used for the movement of the Company's equipment, supplies and personnel only and the areas of temporary land use for topsoil storage will be used for that purpose only. The Company will ensure that any aggregate or fill stone will not be intermixed with soils and such material will only be used or placed within the dig site area(s).

This Agreement is granted upon the following understandings:

- (a) The rights hereby granted terminate on the 31st day of December, 2016; the actual use of the land shall be from the beginning of construction until December 31st of the year following construction. *If construction activities extend into a second calendar year, then the additional full one year crop loss and disturbance payment will apply.* The Company shall make to the person entitled thereto due compensation for any physical damages resulting from the exercise of the rights hereby granted and if that compensation is not agreed upon it shall be determined in the manner prescribed by section 100 of The Ontario Energy Board Act, 1998, S.O. 1998, Chapter 15, Sched. B, as amended or any Act passed in amendment thereof or substitution therefor;
- (b) After the completion of any pipeline repair and maintenance work conducted on the said lands, the Company at its own expense unless otherwise agreed to by the Owner, will remove construction debris from the said lands and restore the said lands to their former state so far as is reasonably practicable, save and except for items in respect of which compensation is due under paragraph (a) and the Company will also restore any tile, gates and fences interfered with as a result of the Company's repair and maintenance work within or around the said lands to their original performance. Any actual crop loss in any year in excess of the level of compensation provided in Addenda C-1, C-2, C-3, D-1 or D-2 hereof will be paid by the Company upon receipt of satisfactory proof of such loss.
- (c) It is further agreed that the Company shall assume all liability, including environmental liability,

and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this indenture or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Owner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not be liable under this Paragraph to the extent to which such loss, damage or injury is caused or contributed to by the gross negligence or default of the Owner, its servants or agents.

(d) Addenda A, B-1, B-2, C-1, C-2, C-3, D-1, D-2 and E attached hereto and made a part hereof are for the specific purpose of addressing matters of construction practices and compensation relating to the Company's pipeline repair and maintenance dig program (Addenda B-1, B-2, C-1, C-2, C-3, D-1 and D-2 hereinafter being referred to collectively as the "Compensation Addenda"). Compensation payments as set out in Addenda B-1 and B-2 selected and initialled as accepted by the Owner and approved by the Company shall be binding on the parties hereto. It is further understood that due to the investigative nature of the repair and maintenance program, information will become known during the Company's activities and the actual dig area(s) within the lands subject to the Company's easement and temporary land use area(s) for topsoil storage adjacent to the dig sites may need to extend beyond the lands as set out on the sketch attached hereto. The Company shall notify the Owner if such extension will occur and it is agreed and understood that all of the terms and conditions and matters of compensation as may be applicable and which are set out herein shall apply to any such lands. No additional lands shall be used for access to the dig site beyond the lands set out on the sketch attached hereto without the Owners written consent.

The Company and the Owner agree and acknowledge that this agreement is specific to the purposes hereof, being the exposure, inspection, repair, replacement, reconstruction or maintenance of the Company's gas transmission pipeline(s), and nothing contained herein shall be treated as a precedent in any future easement(s).

The Company and the Owner agree to perform the covenants on its part herein contained.

DATED this day of , 2016.

Company Name: **C&R Cattle Co. Inc.**

Name:

Title:

I have authority to bind the Corporation. (if applicable)

Mailing Address:

Property Address: 24087 Coldstream Road

H.S.T. No.:

UNION GAS LIMITED

Per: Mervyn R. Weishar

Title: Senior Land Specialist

I have authority to bind the Corporation.

ADDENDUM “A”

PIPELINE SYSTEM INTEGRITY DIG AGREEMENT

Property (File) No: T2601-184

Landowner(s) Owner: C&R Cattle Co. Inc.

1) Repair and Maintenance Program:

This agreement provides for the use of the specific portions of the Owners lands as set out on the sketch attached hereto and does not replace or amend the rights granted to the Company under it's permanent easement agreements affecting the lands of the Owner.

2. Pipeline Construction Procedures:

- a) The Company will use boundary stakes to identify both the dig area and access area;
- b) The normal or expected time period to complete an INVESTIGATIVE DIG, being the initial exposure, examination and in place repair of the pipeline is 30 to 35 working days. In wet weather conditions and in recognition of the Company commitment to its wet soils shut down provisions set out in Section 7 of this Addendum and in Addendum “E”, it is acknowledged that more working time could be required.

The construction season for purposes of this agreement shall be from June 1st to October 15th inclusive annually. The late or early compensation as set out in Addenda D-1 or D-2 hereto shall apply to any work undertaken by the Company outside of the construction season.

- c) The equipment used to undertake the pipeline repair and maintenance work will be equipment with a ground pressure of 20 psi or less such as tracked and wide-tired vehicles. Appropriate farm equipment will be used for clean-up operations. Travel to and from any dig site will be restricted for vehicles which may exceed a 20 psi ground pressure including trucks as required for movement of personnel and supplies.

Should 10 feet or more of pipeline replacement be required the anticipated additional equipment which would be required which may exceed the 20 psi ground pressure includes:

tracked sidebooms (or equivalent)
welding rigs
dump trucks

All sites at which 10 feet or more of replacement pipeline is installed will be considered “REPLACEMENT DIG” sites for purposes of this agreement and in particular for purposes of compensation as set out in the Compensation Addenda hereto. Work at such replacement sites will require more than time to complete than a basic dig (35-70 working days).

- d) In the area of the digs, either investigative or replacement, the Company will completely strip the topsoil from the existing easement as indicated on the attached drawing, utilizing a temporary land use area (“TLU”) for topsoil storage. Compensation for any dig site will be based upon a minimum one-half (1/2) acre site.
- e) The Company does not recommend that the topsoil be stripped on the access roadway on agricultural lands. However, should the Owner request stripping of the access for a REPLACEMENT DIG site, the access area will be stripped to a width no greater than 15 feet allowing equipment to travel on subsoil. The top-soil will be stored on TLU adjacent to the access and subject to agreement with the Owner to the contrary, the TLU will be restricted to an area of 12 feet in width adjacent to the access roadway. All TLU for topsoil storage will be compensated at the rates set out in the Compensation Addenda hereto and all topsoil storage areas will be outside of the lands subject to the easement for the pipeline being exposed for the purposes of this agreement.
- f) The Company will ensure all its standard construction practices as registered with the Fuels Safety Division of the Technical Standards and Safety Authority and environmental mitigation measures will be followed to ensure a proper repair and clean-up.
- g) Unless there is an agreement with the Owner to the contrary and the Company is not required to haul away subsoil from the dig site, all dig site land will be returned to original grade and construction will be undertaken to avoid the creation of crowns over the dig areas. It is further understood however, that if the Company imports fill (such as sand) to be placed around a pipe, excess sub-soil will be removed from the said lands if such removal is required in order to achieve a return to original grade. In location(s) within a dig area where a crown remains after clean-up of greater than 50mm (2 inches), the topsoil will be stripped and excess subsoil removed. If required, the area will then be subsoiled and stones picked. The topsoil shall then be replaced over the area using a dozer and the area will be levelled with the surrounding area. If required, the area will be chisel plowed and stones picked to the satisfaction of the Chief Inspector in consultation with the Owner.

- h) The year following construction, if subsidence or erosion occurs to a depth of greater than 50 mm (2 inches) or where surface drainage is adversely affected, the Company shall be responsible for importing topsoil to repair any such subsidence or erosion. The imported topsoil is to;
- i) be natural, cultivated, medium loam, neither clay nor sandy in nature, capable of sustaining heavy agricultural growths,
 - ii) be from a source approved by the Company after consultation with the Owner.
- i) In accordance with standard Company practice, the disturbed area will be cultivated and stones will be picked as required.
- j) Based on existing tile plans, the Company will repair and restore all field drainage systems and municipal drainage systems to their original performance. The Company shall make best efforts to avoid existing tile systems. The Company shall notify the Owner or his/her designate when tile repairs are completed and all repairs are to be inspected and approved by the Owner or his/her designate prior to backfilling, where practicable. Should the depth of the soil be limited or such other conditions exist so as to place exiting tile systems at risk of damage resulting from the pipeline repair and maintenance work of the Company, additional soil or wood or steel mats will be used to protect the tile system(s).
- All tile repairs are guaranteed by the Company. If additional tile work is required due to the construction activity, the Company will employ a qualified tile contractor to make the necessary installation(s) and/or repairs. New tile installations are guaranteed by the Company.
- k) The Company shall repair or replace fences which are damaged by pipeline repair and maintenance work.
- l) The Owner will not execute a final clean-up approval until he/she is satisfied with the clean-up described above. It is suggested that any tenant(s) who are affected by construction accompany the Owner to inspect the clean-up prior to execution of the clean-up approval.

3) Trees:

The Company will take steps to avoid any tree removal while completing its pipeline repair and maintenance work. However, should it be necessary to remove a tree or trees to perform the work or gain access to the site, the Company's standard tree replacement policy will be followed. If, however, a tree in excess of 6 feet in height is removed, a 6 to 8 foot replacement tree will be supplied. The Company will warranty such trees for a period of 3 years following planting.

4) Specialty Crops

Damages to specialty crops, i.e. tobacco, produce, registered seed variety, will be reviewed and compensation negotiated on a site specific basis and paid on a yearly basis as a specialty crop rotation.

Damages to non-annual crops such as alfalfa or pasture will be negotiated for total losses and will be restored to production.

NOTE: Duplicate crop damage payments will not be made if the Owner is already being paid under another existing program of the Company, i.e. Soil Restoration Program.

If the Company and Owner cannot agree on the compensation to be paid for a specialty crop or non-annual crop, such compensation shall be determined at the Company's expense by a jointly-retained, independent and qualified consultant satisfactory to both parties.

5) Results of the Pipeline Repair and Maintenance Dig:

The Owner will be advised in a brief letter report of the Company's findings and the method of corrective action, if any, undertaken. The report will include the Company's analysis and the data used in that analysis.

6) Soil Testing

The Company undertakes to do soil testing according to the following:

- a) Compaction testing will be completed of the soils in the disturbed area during clean-up both on and off easement and the results will be provided to the Owner.
- b) If compaction tests indicate residual compaction, remedial work to alleviate such compaction will be undertaken. Unless there is an agreement between the Company and the Owner to the contrary, work undertaken to alleviate compaction shall be performed prior to the return of topsoil to the affected area(s).
- c) The soils in the disturbed area and any soils imported to make repairs will be tested for soy bean cyst nematode and a report will be provided to the landowner.

- d) At the request of the Owner and with the agreement of the Company, soil testing for fertility of soils within the affected area(s) shall be undertaken, at the Company's expense, by a jointly-retained independent and qualified consultant satisfactory to both of the parties hereto. The Company shall be responsible for the implementation of all commercially reasonable recommendations as may be made by such consultant for the purpose of rehabilitation of soils directly and adversely affected by the Company's activities hereunder.

7) Wet Soils Shutdown

Except in the case of an emergency requiring immediate action, the Company will follow its wet soils practice as set out in Addenda "E" hereto during repair or maintenance work on agricultural lands. Some of the considerations in the practice are:

- a) extent of surface ponding;
- b) extent and depth of rutting;
- c) surface extent and location of potential rutting and compaction (ie. can traffic be re-routed within the said lands around wet area(s));
- d) type of equipment and nature of the construction operations proposed for that day.
- e) In the event that repair and maintenance work is carried out in wet soils, the wet soils compensation as set out in Addendas D-1 or D-2 hereto shall be payable for the dig site, access and topsoil storage areas. If the Owner and Company can not agree upon the payment of wet soils compensation as provided herein, the Company will arrange, at its expense, for an independent third party consultant satisfactory to the parties hereto to attend and make a determination as to the payment of wet soils compensation, and the Owner and the Company agree to be bound by his determination.

8) Cover Crops

Upon completion of a pipeline repair and maintenance dig and at the request of the Owner, the Company shall establish a cover crop on the said lands. The type of cover crop established shall reflect the commercially reasonable wishes and direction of the Owner.

9) Survival

With respect to the provisions of Article 2(j) concerning the Company's obligation for repairing and/or installing new tiles, those provisions shall survive the termination of this agreement, provided that the tiles repaired or installed by the Company have not been altered, moved, repaired, adjusted or removed by the Owner, unless otherwise agreed to in writing by Company and the Owner. The provisions of this agreement respecting soil restoration shall survive the termination of this agreement, provided that the Owner notifies the Company's Manager, Lands within five years of the termination date of the Owners' requirement for remedial work. Should the Owner require performance in the form of remedial work associated with soil restoration in the area(s) affected by this agreement, the Owner must notify the Company's Manager, Lands before any restoration work is undertaken. In the event of such remedial work, the Owner shall be compensated for crop loss in accordance with the Compensation Addenda hereto, provided that duplicate crop damage payments will not be made to the extent that the Owner has already been paid under this or another existing program of the Company.

ADDENDUM "B-1"**PIPELINE SYSTEM INTERGRITY DIG AGREEMENT COMPENSATION**

Property (file) No: T2601-184

Landowner(s) Owner: C&R Cattle Co. Inc.

(Check all applicable items of compensation)

INVESTIGATIVE DIG (access typically not stripped)

	<u>ACRES</u>	<u>RATE</u>	<u>TOTAL</u>
() Temp. Land Use and Damages for access (off easement)	0.00	\$26,113.76	\$0.00
() Damages for access (on easement)	0.00	\$12,613.76	\$0.00
() Temp. Land Use and Damages for topsoil storage (off easement)	0.00	\$9,180.00	\$0.00
() Damages for topsoil storage (on easement)	0.00	\$2,430.00	\$0.00
() Damages for dig site (actual acres)	0.00	\$31,534.39	\$0.00

SUB-TOTAL 1**\$0.00****Note: * minimum payment based on a 0.5 acre site**

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

REPLACEMENT DIG (access likely to be stripped)

	<u>ACRES</u>	<u>RATE</u>	<u>TOTAL</u>
() Temp. Land Use and Damages for access (off easement)	0.00	\$38,727.51	\$0.00
() Damages for access (on easement)	0.00	\$25,227.51	\$0.00
() Temp. Land Use and Damages for topsoil storage (off easement)	0.00	\$9,180.00	\$0.00
() Damages for topsoil storage (on easement)	0.00	\$2,430.00	\$0.00
() Damages for dig site	0.50	\$31,534.39	\$15,767.20

SUB-TOTAL 2**\$15,767.20****Note: * minimum payment based on a 0.5 acre site**

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

ACTIVITIES IN WET SOILS / LATE OR EARLY ACTIVITIES

() See Addendum B-2.

GORED AREAS AND EXTRA HEADLAND AREAS

	<u>ACRES</u>	<u>RATE</u>	<u>TOTAL</u>
() Crop Damages	0.00	\$960.00	\$0.00
() Disturbance Damages	0.00	\$1,470.00	\$0.00

ACCESS / DIG SITE LANDS OCCUPIED OR INACCESSIBLE FOR A 2nd YR

() Crop Damages	0.00	\$960.00	\$0.00
() Disturbance Damages	0.00	\$5,880.00	\$0.00

SUB-TOTAL 3**\$0.00**

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

NOTES:

Applicable payment to be inserted appropriate to an investigative dig and adjusted for the eventual use.

Minimum payments required to be remitted at signing.

TOTAL (Sub-totals 1 to 3)**\$15,767.20**

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

ADDENDUM "B-2" PIPELINE SYSTEM INTERGRITY DIG AGREEMENT COMPENSATION

Property (file) No: T2601-184
Landowner(s) Owner: C&R Cattle Co. Inc.

NOTE: The Company acknowledges that if dig work proceeds in wet soils, or earlier or later than the agreed to construction season it must remit the following additional 50% payment of the agreed to Damage Payments herein.

(Check all applicable items of compensation)

INVESTIGATIVE DIG (access typically not stripped)

	<u>ACRES</u>	<u>RATE</u>	<u>TOTAL</u>
() Temp. Land Use and Damages for access (off easement)	0.00	\$6,306.88	\$0.00
() Damages for access (on easement)	0.00	\$6,306.88	\$0.00
() Temp. Land Use and Damages for topsoil storage (off easement)	0.00	\$1,215.00	\$0.00
() Damages for topsoil storage (on easement)	0.00	\$1,215.00	\$0.00
() Damages for dig site (min 0.5ac)	0.50	\$15,767.20	\$7,883.60
SUB-TOTAL 1			<u>\$7,883.60</u>

Note: * minimum payment based on a 0.5 acre site

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

REPLACEMENT DIG (access likely to be stripped)

	<u>ACRES</u>	<u>RATE</u>	<u>TOTAL</u>
() Temp. Land Use and Damages for access (off easement)	0.00	\$12,613.76	\$0.00
() Damages for access (on easement)	0.00	\$12,613.76	\$0.00
() Temp. Land Use and Damages for topsoil storage (off easement)	0.00	\$1,215.00	\$0.00
() Damages for topsoil storage (on easement)	0.00	\$1,215.00	\$0.00
() Damages for dig site	0.00	\$15,767.20	\$0.00
SUB-TOTAL 2			<u>\$0.00</u>

Note: * minimum payment based on a 0.5 acre site

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

TOTAL (Sub-Totals 1 or 2) \$7,883.60

Initialled to indicate acceptance by Owner(s):

Initialled to indicate approval by Union Gas Limited:

2 Per acre compensation as provided in this Addendum B-2 has been calculated in accordance with compensation values set out in Addend D-1 and D-2

ADDENDUM "C-1"
PIPELINE SYSTEM INTEGRITY DIG COMPENSATION
 Payment Summary - Rates Per Acre
ON-EASEMENT - NORMAL CONSTRUCTION

	Access NOT Stripped	Access Stripped	Investigative/Replacement Dig Site (Always Stripped and on easement)	Top Soil Storage (Note: Top Soil Storage Never Stripped)
LAND USE	\$0.00	\$0.00	\$0.00	\$0.00
(See note 2)	0% land value	0% land value	0% land value	0% land value
DISTURBANCE DAMAGE	\$2,940.00	\$5,880.00	\$7,350.00	\$1,470.00
	50% of Disturbance value	100% of Disturbance value	125% of Disturbance value	25% of Disturbance value
ONE TIME CROP LOSS	\$9,673.76	\$19,347.51	\$24,184.39	\$960.00
(See note 1)	50% of One Time Crop Loss	100% of One Time Crop Loss	125% of One Time Crop Loss	100% of One Year Crop Loss
Total	\$12,613.76	\$25,227.51	\$31,534.39	\$2,430.00

NOTES:

- 1 - calculated as per Addendum C-3
- 2 - Land value is not part of the compensation as all the work is on easement.

ADDENDUM "C-2"
PIPELINE SYSTEM INTEGRITY DIG COMPENSATION
 Payment Summary - Rates Per Acre
OFF-EASEMENT - NORMAL CONSTRUCTION

	Access NOT Stripped	Access Stripped	Investigative/Replacement Dig Site (Always Stripped and on easement)	Top Soil Storage (Note: Top Soil Storage Never Stripped)
LAND USE	\$13,500.00 100% land value	\$13,500.00 100% land value	\$0.00 0% land value	\$6,750.00 50% land value
DISTURBANCE DAMAGE	\$2,940.00 50% of Disturbance value	\$5,880.00 100% of Disturbance value	\$0.00 0% of Disturbance value	\$1,470.00 25% of Disturbance value
ONE TIME CROP LOSS (1)	\$9,673.76 50% of One Time Crop Loss	\$19,347.51 100% of One Time Crop Loss	\$0.00 0% of One Time Crop Loss	\$960.00 100% of One Year Crop Loss
Total	\$26,113.76	\$38,727.51	Dig is always on easement N/A	\$9,180.00

1 - calculated as per Addendum C-3

ADDENDUM "C-3"**PIPELINE SYSTEM INTEGRITY DIG AGREEMENT COMPENSATION
ONE-TIME CROP LOSS COMPENSATION**

First year crop loss @ 100%	\$960.00
Second year crop loss @ 75%	\$720.00
Third year crop loss @ 56.3%	\$540.48
Fourth year crop loss @ 42.2%	\$405.12
Fifth year crop loss @ 31.6%	\$303.36
Sixth year crop loss @ 23.7%	<u>\$227.52</u>
SUB-TOTAL	<u>\$3,156.48</u>
Present Value Of Future Loss @ 23.7% compensation for one-time crop loss will be based on a gross return of \$960.00 per acre with future loss to be calculated on an annual basis based on the average of the Interest rates posted on May 1st by the Royal Bank of Canada and the Canadian Imperial Bank of Canada for a five year GIC	\$15,691.03 ⁽¹⁾
Allowance for additional fertilizer	\$300.00
Stonepicking	\$200.00
TOTAL ONE-TIME CROP LOSS PAYMENT PER ACRE	\$19,347.51

(1) Example of calculations of Present Value of Future Loss

* Assume Interest Rate of 1.45%

* \$227.52 (Sixth year crop loss payment) divided by 1.45% = \$15,691.03 (2015)

DISTURBANCE DAMAGES

The following is an example of the formula used to calculate the per acre "Disturbance" Damage payment.

The concept of "disturbance" damage is that pipeline construction inevitably results in temporary disturbance to use of the easement and top soil storage lands. Therefore, compensation for such damage is primarily aimed at agricultural field operations and includes a fee for top soil storage "off easement."

Example (per acre of easement):

Average Annual Crop Revenue (ACR) =	\$960.00
Lost Time for Negotiations @ 20% of the average annual crop yield (as per crop damage payment)	\$192.00
Extra tillage @ 20% of the average annual crop yield	\$192.00
Extra Planting & Cultivation @ 20% of the annual crop Revenue (ACR)	\$192.00
Restricted headlands @ 20% of the average annual crop yield	\$192.00
Extra Harvesting @ 20% of the average annual crop yield	\$192.00
Additional Disturbance and Injurious Affection	\$3,000.00
Goodwill and Overall Inconvenience Signing Bonus & Gratuitous payment @ 2 x Average Annual Crop Revenue	<u>\$1,920.00</u>
TOTAL "DISTURBANCE" PAYMENT PER ACRE =	<u>\$5,880.00</u>

ADDENDUM "D-1"
PIPELINE SYSTEM INTEGRITY DIG COMPENSATION
 Payment Summary - Rates Per Acre
ON-EASEMENT - WET/LATE/EARLY CONSTRUCTION

	Access NOT Stripped	Access Stripped	Investigative/Replacement Dig Site (Always Stripped and on easement)	Top Soil Storage (Note: Top Soil Storage Never Stripped)
LAND USE	\$0.00 0% land value	\$0.00 0% land value	\$0.00 0% land value	\$0.00 0% land value
DISTURBANCE DAMAGE	\$1,470.00 25% of Disturbance Damages	\$2,940.00 50% of Disturbance Damages	\$3,675.00 62.5% of Disturbance Damages	\$735.00 12.5% of Disturbance Damages
ONE TIME CROP LOSS (1)	\$4,836.88 25% of One Time Crop Loss	\$9,673.76 50% of One Time Crop Loss	\$12,092.20 62.5% of One Time Crop	\$480.00 50% One Time Crop Loss
Total	\$6,306.88	\$12,613.76	\$15,767.20	\$1,215.00

1 - calculated as per Addendum C-1

2 - Compensation as provided in this Addendum D-1 is in addition to compensation as provided in Addendum C-1 and is payable pursuant to the provisions of Addendum A para. 2(b) and para. 7

ADDENDUM "D-2"
PIPELINE SYSTEM INTEGRITY DIG COMPENSATION
 Payment Summary - Rates Per Acre
OFF-EASEMENT - WET/EARLY CONSTRUCTION

	Access NOT Stripped	Access Stripped	Investigative/Replacement Dig Site (Always Stripped and on easement)	Top Soil Storage (Note: Top Soil Storage Never Stripped)
LAND USE	\$0.00 0% land value	\$0.00 0% land value	\$0.00	\$0.00 0% land value
DISTURBANCE DAMAGE	\$1,470.00 25% of Disturbance Damages	\$2,940.00 50% of Disturbance Damages	\$0.00	\$735.00 12.5% of Disturbance Damages
ONE TIME CROP LOSS (1)	\$4,836.88 25% of One Time Crop Loss	\$9,673.76 50% of One Time Crop Loss	\$0.00	\$480.00 50% One Time Crop Loss
Total	\$6,306.88	\$12,613.76		\$1,215.00

1 - calculated as per Addendum C-3

2 - Compensation as provided in this Addendum D-2 is in addition to compensation as provided in Addendum C-1 and is payable pursuant to the provisions of Addendum A para. 2(b) and para. 7

ADDENDUM "E"
PIPELINE SYSTEM INTEGRITY DIG AGREEMENT
WET SOILS SHUTDOWN PRACTICE

The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.

While constructing, repairing or performing maintenance work ("construction activities") on pipelines during the normal construction period (June 1st to October 15th) Union's senior inspectors inspect right-of-way conditions each day before construction activities commence for that day. If, in the judgment of these inspectors, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect on the soils due to wet soils conditions, the contractor is prohibited from starting construction activities. The wet soil shutdown restriction would be in effect until, in the judgment of Union's chief inspector, the soils would have sufficiently dried to the extent that commencing construction activities would have no adverse affects on the soils.

Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. In recognition of this, Union budgets for and includes in contract documents, provisions for payment to the pipeline contractors for wet soils shutdown thereby removing any potential incentive for the contractor to work in wet conditions.

In addition, Union's inspection staff is responsible for ensuring that construction activities do not occur during wet soils shutdown. This would include shutting down construction activities if soils became wet during the day.

It should, however, be recognized that there may be situations when construction activities cannot be carried out during the normal construction period due to delays in project timing and it may become necessary to work in wet conditions in the spring or fall of the year (after September 15th and before May 31st) . When this situation cannot be avoided, additional mitigation measures are put in place to minimize resulting damages. Union will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted.

ATTACHMENT 16

DECISION AND ORDER

EB-2019-0218

ENBRIDGE GAS INC.

Application for approval to construct natural gas pipelines and ancillary facilities in the Township of St. Clair, in the County of Lambton

By Delegation, before: Nancy Marconi

March 12, 2020

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1 INTRODUCTION AND SUMMARY

This is the Decision of the Ontario Energy Board (OEB) regarding an application filed by Enbridge Gas Inc. (Enbridge Gas) on October 7, 2019.

Enbridge Gas applied under section 90(1) of the *Ontario Energy Board Act, 1998* (OEB Act) for approval to construct approximately 1.2 kilometres of Nominal Pipe Size (NPS) 20 natural gas pipeline and ancillary facilities from the Dow Valve Site to the Bluewater Interconnect at a new LaSalle Pipeline Valve Site (Project). Enbridge Gas also applied under section 97 of the OEB Act for approval of the Form of Easement and Temporary Land Use agreements it will require for construction of the Project.

The Project will increase the Sarnia Industrial Line (SIL) system capacity to meet demand growth in the south Sarnia area. Construction is scheduled to begin in May 2021 and the Project is expected to be in-service in November 2021.

A map of the Project is attached as Schedule A to this Decision and Order.

The OEB examined all aspects of Enbridge Gas' leave to construct application and is satisfied that the Project is in the public interest. Leave to construct the Project is granted subject to the conditions of approval attached as Schedule B to this Decision and Order (Conditions of Approval). The OEB also approves the Form of Easement and Form of Temporary Land Use Agreement that Enbridge Gas will offer to affected landowners.

On October 8, 2019, Enbridge Gas provided the MENDM with its Indigenous Consultation Report for the Project and requested that the MENDM determine if the procedural aspects of the duty to consult had been sufficiently addressed.

As part of its application with the OEB, Enbridge Gas filed a summary of Enbridge Gas' Indigenous consultation activities for the Project.¹² Enbridge Gas also filed an updated Indigenous Consultation Report: Log and Project Correspondence, as of December 19, 2019.

OEB staff submitted that Enbridge Gas appeared to have made efforts to engage with affected Indigenous groups and that no concerns that could materially affect the Project had been raised through its consultation to date¹³.

On February 27, 2020, Enbridge Gas filed a letter from MENDM notifying Enbridge Gas that it had completed its review of the Indigenous Consultation Report for the Project and had found that the procedural aspects of consultation undertaken by Enbridge Gas to date had been satisfactory. MENDM noted its expectation that Enbridge Gas will continue its consultation activities throughout the life of the Project¹⁴.

Findings

The OEB finds that Enbridge Gas followed the OEB's Guidelines and has made efforts to consult with the five Indigenous communities that were identified by the MENDM, as described in Enbridge Gas' Indigenous Consultation Report. The Indigenous communities were given direct notice of this proceeding and did not intervene or otherwise raise concerns before the OEB, and the MENDM provided a letter on February 27, 2020 confirming that the procedural aspects of the duty to consult have been satisfactorily addressed by Enbridge Gas to date. Therefore, the OEB finds that Enbridge Gas' duty to consult has been satisfied.

3.6 Land Matters

Enbridge Gas indicated that the Project requires approximately 1.72 hectares of permanent easement, 3.79 hectares of temporary easement, and 0.58 hectares of fee simple lands. Enbridge Gas stated that negotiations with directly impacted landowners

¹² Application, Exhibit C, Tab 8, Schedules 1,2

¹³ OEB Staff Submission, page 7.

¹⁴ Exhibit B-1-8, attachment 3.

are ongoing and that it expects to have all land rights in place prior to the commencement of the Project¹⁵.

According to the ER, a consultation and engagement program was undertaken to permit interested and potentially affected parties to provide input into the Project. The ER stated that Hydro One Networks Inc. (HONI) had advised Enbridge Gas that 53 metres of the proposed pipeline is located within HONI-owned lands known as the Sarnia South Transmission Station. HONI informed Enbridge Gas that it may need to utilize these lands in the future, in which case Enbridge Gas would have to remove the pipeline to accommodate HONI's future needs on its land.

OEB staff requested that Enbridge Gas comment on the potential need for a station on the HONI-owned lands and the implications for the Project, including what Enbridge Gas intends to do in the event that HONI requires these lands for a station in the future. In its responses¹⁶, Enbridge Gas stated that HONI has not expressed a specific need for or plans to build on this site in the future. Enbridge Gas also stated that, at this time, it does not foresee any impacts to the proposed pipeline and that if HONI intends to build a station in the future, Enbridge Gas would work with HONI to protect the integrity of the SIL system and ensure that there is no interruption of service to the Sarnia market.

Enbridge Gas commented that negotiations between Enbridge Gas and HONI are ongoing for a permanent easement on the HONI-owned lands.

Enbridge Gas sought approval of the Form of Easement and Form of Temporary Land Use Agreement, which it notes were approved by the OEB in previous pipeline projects.¹⁷

OEB staff submitted that the OEB should approve the proposed Form of Easement and Form of Temporary Land Use Agreement.

Findings

The OEB finds that the Form of Easement and Form of Temporary Land Use Agreement filed by Enbridge Gas, both of which are consistent with previously-approved forms of agreement, are approved.

¹⁵ Exhibit B-1-7, page 3.

¹⁶ OEB Staff Interrogatory 8

¹⁷ OEB Staff Interrogatory 9

With respect to the HONI-owned lands, the OEB expects that should a need arise for HONI to utilize its land in the future, Enbridge Gas and HONI will work together to avoid interruption of service to the Sarnia area, protect the integrity of both the electricity and natural gas systems, and minimize costs for both electricity and natural gas ratepayers.

3.7 Conditions of Approval

Section 23 of the OEB Act permits the OEB, when making an order, to impose conditions of approval as it considers appropriate.

As part of the interrogatory process, OEB staff proposed draft conditions of approval. Enbridge Gas had no objections to the conditions of approval proposed by OEB staff. In its submissions, OEB staff argued that the OEB should consider two amendments to the draft conditions of approval.

As the MENDM's Indigenous consultation sufficiency letter was outstanding at the time of the submission, OEB staff proposed that the OEB consider adding the following condition¹⁸:

Authorization for leave to construct is subject to Enbridge Gas filing with the OEB a letter from the MENDM confirming that Enbridge Gas has satisfied the procedural aspects of the Crown's duty to consult with respect to the proposed Project.

OEB staff also submitted that as an OEB decision on this application is expected in March 2020, that Condition 2(a) be amended such that the OEB's authorization for the leave to construct terminates 18 months, rather than 12 months, after the decision is issued. OEB staff submitted that this would better align with the anticipated construction start date of May 2021¹⁹.

In its reply submission, Enbridge Gas supported OEB staff's proposed amendments, however it noted that when comparing the draft conditions of approval included in interrogatories with those included in OEB staff's written submission, it had noticed that the notice period stipulated within condition 2.(b)i. had changed. Enbridge Gas noted that the change from "ten days prior to the date construction commences" to "five days prior to the date construction commences" was likely an oversight, but that it would be supportive of either notice period²⁰.

¹⁸ OEB Staff submission, page 9.

¹⁹ OEB Staff submission, page 9.

²⁰ Enbridge Gas reply submission, page 10.

4 ORDER

IT IS ORDERED THAT:

1. Enbridge Gas Inc. is granted leave, pursuant to section 90(1) of the OEB Act, to construct approximately 1.2 kilometres of NPS 20 natural gas pipeline and ancillary facilities from the Dow Valve Site to the Bluewater Interconnect at a new LaSalle Pipeline Valve Site, as described in its application.
2. The OEB approves the Form of Easement and Form of Temporary Land Use Agreement that Enbridge Gas Inc. has offered or will offer to each owner of land affected by the Project.
3. Leave to construct is subject to Enbridge Gas Inc. complying with the conditions of approval set out in Schedule B.
4. Enbridge Gas Inc. shall pay the OEB's costs incidental to this proceeding upon receipt of the OEB's invoice.

DATED at Toronto March 12, 2020

ONTARIO ENERGY BOARD

Original Signed By

Nancy Marconi
Manager, Generation and Transmission Applications

ATTACHMENT 17



Dave Janisse
Technical Manager
Leave to Construct Applications
Regulatory Affairs

tel 519-436-5442
EGIRegulatoryProceedings@enbridge.com

Enbridge Gas Inc.
50 Keil Drive
Chatham, Ontario N7M 5M1
Canada

September 10, 2021

VIA EMAIL and RESS

Christine Long
Registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Christine Long:

**Re: Enbridge Gas Inc. (Enbridge Gas)
Ontario Energy Board (OEB) File: EB-2021-0205
Greenstone Pipeline Project – Application and Evidence**

Enclosed please find the redacted application and evidence for the proposed Greenstone Pipeline Project.

In accordance with the OEB's revised Practice Direction on Confidential Filings effective February 17, 2021, all personal, privileged and commercially sensitive information has been redacted from the following exhibits:

- Exhibit B, Tab 1, Schedule 1, Attachment 1 – Customer Contract
- Exhibit G, Tab 1, Schedule 1, Attachment 5 – Land-owner List
- Exhibit H, Tab 1, Schedule 1, Attachment 7 – Indigenous Consultation Log and associated attachments

The confidential unredacted exhibits will be provided to the OEB under separate cover.

Please contact the undersigned if you have any questions.

Yours truly,

(Original Digitally Signed)

Dave Janisse
Technical Manager, Leave to Construct Applications

Filed: 2021-09-10
EB-2021-0205
Exhibit A
Tab 2
Schedule 1
Page 1 of 4
Plus Attachment

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B; and in particular section 90(1) and section 97 thereof;

AND IN THE MATTER OF an application by Enbridge Gas Inc. for an order granting leave to construct natural gas pipelines in the Municipality of Greenstone.

APPLICATION

1. Enbridge Gas Inc. (“Enbridge Gas” or the “Company”) hereby applies to the Ontario Energy Board (the “OEB”) pursuant to section 90(1) of the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Schedule B (the “Act”), for an Order granting leave to construct approximately 13 km of Nominal Pipe Size (“NPS”) 6 inch extra-high pressure (“XHP”) steel (“ST”) natural gas main within the Municipality of Greenstone, Ontario, in order to provide natural gas distribution service to the proposed Greenstone Mine Project. The Greenstone Mine Project is an open pit gold mine located near the city of Geraldton and operated by Greenstone Gold Mines GP Inc.
2. For ease of reference and to assist the OEB with preparation of the notice of application for the proposed Greenstone Pipeline Project (“Project”), a map of the proposed facilities is included at Attachment 1 to this Exhibit.
3. The Project was identified in Enbridge Gas’s asset management plan as part of the Company’s 2021 Rates proceeding.¹ With leave of the OEB, construction of the

¹ EB-2020-0181, Exhibit C, Tab 2, Schedule 1, p. 381.

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 EB-2021-0205
 Exhibit A
 Tab 2
 Schedule 1
 Page 2 of 4
 Plus Attachment

pipeline is planned to commence in March 2022 and placed into service by March 2023. To meet construction timelines, Enbridge Gas respectfully requests the approval of this application as soon as possible and not later than February 24, 2022. Enbridge Gas also requests a modification to the OEB's Standard Conditions of Approval for leave to construct applications. Specifically, Enbridge Gas requests that the minimum notice period for commencement of construction, set out in 2(a)(i) of the Standard Conditions of Approval, be at least 5 days prior to the commencement of construction instead of 10 days. The proposed construction schedule can be found at Exhibit E, Tab 1, Schedule 1, Table 3.

4. If the OEB determines that it will conduct a hearing for this application, then Enbridge Gas requests that it proceed by way of written hearing in English.
5. Enbridge Gas requests that certain information included in the Exhibits set out in Table 1 be treated as confidential under the OEB's Practice Direction on Confidential Filings as they contain personal, privileged, and/or commercially sensitive information.

Table 1

Exhibit	Description of confidential information
B-1-1 Attachment 1	Personal information, commercially sensitive contract information
G-1-1 Attachment 5	Personal information
H-1-1 Attachment 7	Personal information, privileged information (without prejudice communications)

6. Enbridge Gas requests that the OEB issue the following order(s):
 - (i) pursuant to section 90(1) of the Act, an Order granting leave to construct the Project.

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EB-2021-0205
Exhibit A
Tab 2
Schedule 1
Page 3 of 4
Plus Attachment

- (ii) pursuant to section 97 of the Act, an Order approving the form of temporary land use agreements and easement agreements found at Exhibit G, Tab 1, Schedule 1, Attachments 1 and 2.

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

- (a) The Applicant
- Dave Janisse
Technical Manager, Leave to Construct Applications
- Address: P. O. Box 2001
50 Keil Drive N
Chatham, ON N7M 5M1
- Telephone: (519) 436-5442
- Email: EGIRegulatoryProceedings@enbridge.com
- (b) The Applicant's counsel
- Tania Persad
Senior Legal Counsel
Enbridge Gas Inc.
- Address for personal service 500 Consumers Road
Toronto, ON M2J 1P8
- Mailing Address: P. O. Box 650, Scarborough, ON M1K 5E3
- Telephone: 416-495-5891
- Fax: 416-495-5994
- Email: tania.persad@enbridge.com

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Tab 2
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DATED at the City of Chatham, Ontario this 10th day of September 2021.

ENBRIDGE GAS INC.

(Original Digitally Signed)

Dave Janisse,
Technical Manager, Leave to Construct Applications

LAND MATTERS & AGREEMENTS

Land Requirements

1. The PR for the Project is summarized in Exhibit C, Tab 1, Schedule 1, and described in more detail in Section 2 of the ER, found at Exhibit F, Tab 1, Schedule 1, Attachment 1.
2. The PR for the Project follows the public road allowance for the majority of the Project. The only required permanent easement required for the Project was obtained from Greenstone Gold Mines GP Inc.
3. Temporary working areas may be required along the PR where the road allowance is too narrow or confined to facilitate construction. These areas will be identified with the assistance of the contractor that will perform the construction. Agreements for temporary working rights will be negotiated where required.

Authorizations and Permits Required

4. Enbridge Gas's preliminary work on the Project has identified the following potential required authorizations:

Federal:

- Fisheries and Oceans Canada.

Provincial:

- Ontario Energy Board;
- Infrastructure Ontario;
- Ministry of Transportation;

- MHSTCI;
- Ministry of Environment, Conservation and Parks;
- Ministry of Indigenous Affairs;
- Ministry of Northern Development, Mines, Natural Resources and Forestry; and
- Hydro One.

Municipal:

- Town of Geraldton, Municipality of Greenstone.

Other:

- Indigenous engagement;
 - Landowner agreements; and
 - Utility circulation.
5. Other authorizations, notifications, permits and/or approvals may be required in addition to those identified above.
 6. Enbridge Gas will obtain all required permits, easements and temporary land use agreements if and as required for the route and location of the proposed facilities prior to the commencement of construction.
 7. Attachment 1 to this Exhibit contains the standard form Temporary Land Use Agreement that will be provided to landowners for temporary working space requirements. This standard form Temporary Land Use Agreement is updated from the agreement approved by the OEB for use in Enbridge Gas's 2021/22 Storage

Enhancement Project¹. Attachment 3 to this Exhibit is a comparison version of the Temporary Land Use Agreement to the one previously approved by the OEB.

8. Attachment 2 to this Exhibit contains the standard form Easement Agreement that will be provided to landowners for an easement. The standard form Easement Agreement is updated from the agreement approved by the OEB for use in Enbridge Gas's 2021-2022 Storage Enhancement Project². Attachment 4 to this Exhibit is a comparison version of the Easement Agreement to the one previously approved by the OEB.

Land-owner List

9. Attachment 5 to this Exhibit identifies only the directly impacted landowners from whom a permanent or temporary land right is needed.

¹ EB-2020-0256 Decision and Order

² *ibid*

TEMPORARY LAND USE AGREEMENT

(hereinafter called the "Agreement")

Between

(hereinafter called the "Owner")

and

ENBRIDGE GAS INC.

(hereinafter called the "Company")

In consideration of the sum of _____XX/100 Dollars (\$_____), payable by the Company to the Owner within thirty (30) days of signing of this Agreement in accordance with the Compensation labelled as **Appendix "D"** hereto.

the Owner of **PIN:**

Legal Description: labelled as **Appendix "B"** hereto, hereby grants to the Company, its servants, agents, employees, contractors and sub-contractors and those engaged in its and their business, the right on foot and/or with vehicles, supplies, machinery and equipment at any time and from time to time during the term of this Agreement to enter upon, use and occupy a parcel of land (hereinafter called the "Lands") more particularly described on the Sketch attached hereto labelled as Appendix "A" and forming part of this Agreement, the Lands being immediately adjacent to and abutting the **Choose an item.** for any purpose incidental to, or that the Company may require in conjunction with, the construction by or on behalf of the Company of a proposed **Choose an item.** and appurtenances on the Lands including, without limiting the generality of the foregoing, the right to make temporary openings in any fence (if applicable) along or across the Lands and to remove any other object therein or thereon interfering with the free and full enjoyment of the right hereby granted and further including the right of surveying and placing, storing, levelling and removing earth, dirt, fill, stone, debris of all kinds, pipe, supplies, equipment, vehicles and machinery and of movement of vehicles, machinery and equipment of all kinds.

1. This Agreement is granted upon the following understandings:

- a) The rights hereby granted terminate on the ____ day of ____, 20__.
- b) The Company shall make to the person entitled thereto due compensation for any damages resulting from the exercise of the right hereby granted and if the compensation is not agreed upon it shall be determined in the manner prescribed by Section 100 of The Ontario Energy Board Act, R.S.O. 1998 S.O. 1998, c.15 Schedule B, as amended or any Act passed in amendment thereof or substitution there for;
- c) As soon as reasonably possible after the construction, the Company at its own expense will level the Lands, remove all debris therefrom and in all respects, restore the Lands to their former state so far as is reasonably possible, save and except for items in respect of which compensation is due under paragraph (b) and the Company will also restore any gates and fences interfered with around, (*if applicable*) the Lands as closely and as reasonably possible to the condition in which they existed immediately prior to such interference by the Company.
- d) It is further agreed that the Company shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Owner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not be liable under the Clause to the extent to which such loss, damage or injury is caused or contributed to by the negligence or wilful misconduct of the Owner.

The Company and the Owner agree to perform the covenants on its part herein contained.

Dated this ____ day of _____, 20__.

[Insert name of individual or corporation]

Signature (Owner)

Print Name(s) (and position held if applicable)
Choose an item

Address (Owner)

Signature (Owner)

Print Name(s) (and position held if applicable)
Choose an item.

Address (Owner)

ENBRIDGE GAS INC.

Signature (Company)
, Choose an item.

Name & Title (Enbridge Gas Inc.)

I have authority to bind the Corporation.

519-436-4673

Telephone Number (Enbridge Gas Inc.)

Additional Information: (if applicable):

Property Address:

HST Registration Number:

PIPELINE EASEMENT

(hereinafter called the "Easement")

Between

(hereinafter called the "Transferor")

and

ENBRIDGE GAS INC.

(hereinafter called the "Transferee")

This is an Easement in Gross.

WHEREAS the Transferor is the owner in fee simple of those lands and premises more particularly described as:

PIN:

Legal Description:

(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, 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/PART OF THE PIN:

Legal Description:

(hereinafter called the "Lands") to survey, lay, construct, maintain, brush, clear trees and vegetation, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use and/or operate one pipeline for the transmission of Pipeline quality natural gas as defined in The Ontario Energy Board Act S.O. 1998 (hereinafter called 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 ---- 00/100 Dollars (\$) (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, the 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 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. As part of the Transferee's obligation to restore the Lands upon surrender of its easement, the Transferee agrees at the option of the Transferor to remove the Pipeline from the Lands. The Transferee and the Transferor shall surrender the Easement and the Transferee shall remove the Pipeline at the Transferor's option where the Pipeline has been abandoned. The Pipeline shall be deemed to be abandoned where: (a) corrosion protection is no longer applied to the Pipeline, or, (b) the Pipeline becomes unfit for service in accordance with Ontario standards. The Transferee shall, within 60 days of either of these events occurring, provide the Transferor with notice of the event. Upon removal of the Pipeline and restoration of the Lands as required by this agreement, the Transferor shall release the Transferee from further obligations in respect of restoration.
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, lock stone, 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. 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. In the event there is a change in the use of all, or a portion of the Transferor Lands adjacent to the Lands which results in the pipeline no longer being in compliance with the pipeline design class location requirements, then the Transferee shall be responsible for any costs associated with any changes to the Pipeline required to ensure compliance with the class location requirements.
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. It is further agreed that the Transferee shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this Easement or anything done or maintained by the Transferee hereunder or intended so to be and the Transferee shall at all times indemnify and save harmless the Transferor from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Transferee shall not be liable under the clause to the extent to which such loss, damage or injury is caused or contributed to by the 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 Clauses 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 Clause 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) meter strip centered over the Pipeline, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that 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, building, mobile homes or other structure or installation and the Transferor shall not deposit or store any flammable material, solid or liquid spoil, refuse, waste or effluent on the Lands. 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 Easement 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 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 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 registrable 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: Enbridge Gas Inc.
 P.O. Box 2001
 50 Keil Drive North
 Chatham, Ontario N7M 5M1
 Attention: Lands Department
- 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 Transferor's Land and this Easement, including all the covenants and conditions herein contained, shall extend to, be binding upon and inure 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. (a) The Transferee represents that it is registered for the purposes of the Harmonized Goods and Services Tax (hereinafter called "HST") in accordance with the applicable provisions in that regard and pursuant to the Excise Tax Act, (R.S.C., 1985, c. E-15), (hereinafter called "Excise Tax Act"), as amended.

(b) The Transferee shall undertake to self-assess the HST payable in respect of this transaction pursuant to subparagraphs 221(2) and 228(4) of the Excise Tax Act, and to remit and file a return in respect of HST owing as required under the said Act for the reporting period in which the HST in this transaction became payable.

(c) The Transferee shall indemnify and save harmless the Transferor from and against any and all claims, liabilities, penalties, interest, costs and other legal expenses incurred, directly or indirectly, in connection with the assessment of HST payable in respect of the transaction contemplated by this Easement. The Transferee's obligations under this Clause shall survive this Easement.

17. The Transferor hereby acknowledges that this Easement will be registered electronically.

18. Transferee hereby declares that this easement is being acquired by Transferee for the purpose of a hydrocarbon line within the meaning of Part VI of the Ontario Energy Board Act, 1998 and/or a utility line within the meaning of the Ontario Energy Board Act, 1998.

Dated this ____ day of _____ 20__.

Signature (Transferor)

Print Name(s) (and position held if applicable)

Address (Transferor)

Signature (Transferor)

Print Name(s) (and position held if applicable)

Address (Transferor)

ENBRIDGE GAS INC.

Signature (Transferee)

, Choose an item.
Name & Title (Enbridge Gas Inc.)

I have authority to bind the Corporation.

519-436-4673
Telephone Number (Enbridge Gas Inc.)

Additional Information: (if applicable):

Property Address:

HST Registration Number:

TEMPORARY LAND USE AGREEMENT

(hereinafter called the "Agreement")

Between

(hereinafter called the

"Owner") and

ENBRIDGE GAS INC.

(hereinafter called the "Company")

In consideration of the sum of _____XX/100 Dollars (\$ _____), payable by the Company to the Owner within thirty (30) days of signing of this Agreement in accordance with the Compensation labelled as **Appendix "D"** hereto.

the Owner of **PIN:**

Legal Description:- labelled as **Appendix "B"** hereto, hereby grants to the Company, its servants, agents, employees, contractors and sub-contractors and those engaged in its and their business, the right on foot and/or with vehicles, supplies, machinery and equipment at any time and from time to time during the term of this Agreement to enter upon, use and occupy a parcel of land (hereinafter called the "Lands") more particularly described on the Sketch attached hereto labelled as Appendix "A" and forming part of this Agreement, the Lands being immediately adjacent to and abutting the Choose an item. for any purpose incidental to, or that the Company may require in conjunction with, the construction by or on behalf of the Company of a proposed Choose an item. and appurtenances on the Lands including, without limiting the generality of the foregoing, the right to make temporary openings in any fence (if applicable) along or across the Lands and to remove any other object therein or thereon interfering with the free and full enjoyment of the right hereby granted and further including the right of surveying and placing, storing, levelling and removing earth, dirt, fill, stone, debris of all kinds, pipe, supplies, equipment, vehicles and machinery and of movement of vehicles, machinery and equipment of all kinds.-

1. This Agreement is granted upon the following understandings:

- a) The rights hereby granted terminate on the _____ day of _____, 20_____.
- b) The Company shall make to the person entitled thereto due compensation for any damages resulting from the exercise of the right hereby granted and if the compensation is not agreed upon it shall be determined in the manner prescribed by Section 100 of The Ontario Energy Board Act, R.S.O. 1998 S.O. 1998, c.15 Schedule B, as amended or any Act passed in amendment thereof or substitution there for;
- c) As soon as reasonably possible after the construction, the Company at its own expense will level the Lands, remove all debris therefrom and in all respects, restore the Lands to their former state so far as is reasonably possible, save and except for items in respect of which compensation is due under paragraph (b) and the Company will also restore any gates and fences interfered with around, (*if applicable*) the Lands as closely and as reasonably possible to the condition in which they existed immediately prior to such interference by the Company.
- d) It is further agreed that the Company shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this Agreement or anything done or maintained by the Company hereunder or intended so to be and the Company shall at all times indemnify and save harmless the Owner from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Company shall not be liable under the Clause to the extent to which such loss, damage or injury is caused or contributed to by the ~~gross~~-negligence or wilful misconduct of the Owner.-

The Company and the Owner agree to perform the covenants on its part herein contained.

Dated this _____ day of _____ 20_____.

[Insert name of individual or corporation]

 Signature (Owner)

 Print Name(s) (and position held if applicable)

 Address (Owner)

 Signature (Owner)

 Print Name(s) (and position held if applicable)

 Address (Owner)

ENBRIDGE GAS INC.

 Signature (Company)

 , Choose an item.

 Name & Title (Enbridge Gas Inc.)

 I have authority to bind the Corporation.

 519-436-4673

 Telephone Number (Enbridge Gas Inc.)

Additional Information: (if applicable):

Property Address:

HST Registration Number: |

PIPELINE EASEMENT

(hereinafter called the "Easement")

Between _____
(hereinafter called the "Transferor")

and

ENBRIDGE GAS INC.
(hereinafter called the "Transferee")

This is an Easement in Gross.

WHEREAS the Transferor is the owner in fee simple of those lands and premises more particularly described as:

PIN: | |

Legal Description: | |

(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, 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 THE PIN/PART OF THE PIN: |

Legal Description: | |

(hereinafter called the "Lands") to survey, lay, construct, maintain, brush, clear trees and vegetation, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use and/or operate one pipeline for the transmission of Pipeline quality natural gas as defined in The Ontario Energy Board Act S.O. 1998 (hereinafter called 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 ~~XX~~ 00/100 Dollars (\$) (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, the 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 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. As part of the Transferee's obligation to restore the Lands upon surrender of its easement, the Transferee agrees at the option of the Transferor to remove the Pipeline from the Lands. The Transferee and the Transferor shall surrender the Easement and the Transferee shall remove the Pipeline at the Transferor's option where the Pipeline has been abandoned. The Pipeline shall be deemed to be abandoned where: (a) corrosion protection is no longer applied to the Pipeline, or, (b) the Pipeline becomes unfit for service in accordance with Ontario standards. The Transferee shall, within 60 days of either of these events occurring, provide the Transferor with notice of the event. Upon removal of the Pipeline and restoration of the Lands as required by this agreement, the Transferor shall release the Transferee from further obligations in respect of restoration.
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~~lock stone, 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. 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. In the event there is a change in the use of all, or a portion of the ~~Transferor's~~Transferor Lands adjacent to the Lands which results in the pipeline no longer being in compliance with the pipeline design class location requirements, then the Transferee shall be responsible for any costs associated with any changes to the Pipeline required to ensure compliance with the class location requirements.
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. It is further agreed that the Transferee shall assume all liability and obligations for any and all loss, damage or injury, (including death) to persons or property that would not have happened but for this Easement or anything done or maintained by the Transferee hereunder or intended so to be and the Transferee shall at all times indemnify and save harmless the Transferor from and against all such loss, damage or injury and all actions, suits, proceedings, costs, charges, damages, expenses, claims or demands arising therefrom or connected therewith provided that the Transferee shall not be liable under the clause to the extent to which such loss, damage or injury is caused or contributed to by 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 Clauses 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 Clause 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) meter strip centered over the Pipeline, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that 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, building, mobile homes or other structure or installation and the Transferor shall not deposit or store any flammable material, solid or liquid spoil, refuse, waste or effluent on the Lands. 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

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. (a) The Transferee represents that it is registered for the purposes of the Harmonized Goods and Services Tax (hereinafter called "HST") in accordance with the applicable provisions in that regard and pursuant to the Excise Tax Act, (R.S.C., 1985, c. E-15), (hereinafter called "Excise Tax Act"), as amended.

~~(b) The Transferee covenants to deliver a Statutory Declaration, Undertaking and Indemnity confirming its HST registration number, which shall be conclusive evidence of such HST registration, and shall preclude the Transferor from collection of HST from the Transferee.~~

~~(b)~~ The Transferee shall undertake to self-assess the HST payable in respect of this transaction pursuant to subparagraphs 221(2) and 228(4) of the Excise Tax Act, and to remit and file a return in respect of HST owing as required under the said Act for the reporting period in which the HST in this transaction became payable.

~~(c)~~ The Transferee shall indemnify and save harmless the Transferor from and against any and all claims, liabilities, penalties, interest, costs and other legal expenses incurred, directly or indirectly, in connection with the assessment of HST payable in respect of the transaction contemplated by this Easement. The Transferee's obligations under this Clause shall survive this Easement.

17. The Transferor hereby acknowledges that this Easement will be registered electronically.

18. ~~The~~ Transferee hereby declares that this easement is being acquired by ~~the~~ Transferee for the purpose of a hydrocarbon line within the meaning of Part VI of the Ontario Energy Board Act, 1998 and/or a utility line within the meaning of the Ontario Energy Board Act, 1998.

Dated this _____ day of _____ 20__.

Signature (Transferor)

Print Name(s) (and position held if applicable)

Address (Transferor)

Signature (Transferor)

Print Name(s) (and position held if applicable)

Address (Transferor)

ENBRIDGE GAS INC.

Signature (Transferee)

|| Choose an item.
Name & Title (Enbridge Gas Inc.)

I have authority to bind the Corporation.

519-436-4673
Telephone Number (Enbridge Gas Inc.)

Additional Information: (if applicable):

Property Address:

HST Registration Number:

ATTACHMENT 18

ENBRIDGE GAS INC.

Answer to Interrogatory from
OEB Staff ("STAFF")

INTERROGATORY

Reference:

Exhibit G, Tab 1, Schedule 1, Attachment 1, Attachment 2, Attachment 3, Attachment 4

Enbridge Gas filed permanent easement form (Pipeline Easement) without an indication if this form has been previously approved by the OEB.

Enbridge Gas filed the form of Temporary Land Use Agreement it would offer to all the landowners of land where temporary working space rights are required.

With respect to the form of Temporary Land Use Agreement, Enbridge Gas noted that the filed form has been previously approved by the OEB in Enbridge Gas's 2021/2022 Storage Enhancement Project (EB-2020-0256). Enbridge Gas indicated it modified the approved form and filed the comparison forms to show the changes. The changes have been marked and filed for comparison purpose.

Question(s):

- a) Please confirm that the form of permanent pipeline easement filed on the record will or has been offered to the affected landowners.
- b) Please confirm that the filed form of the permanent easement has not been previously approved by the OEB. Please discuss any material differences between the form of permanent easement filed in this application versus the form of permanent easements in other proceedings before the OEB.

Response

- a) Confirmed.
- b) The filed form of permanent easement has not been previously approved by the OEB. Please see Exhibit G, Tab 1, Schedule 1, Page 3, paragraph 8.

Exhibit G, Tab 1, Schedule 1, Attachment 4 is a comparison version of the Easement Agreement to the one previously approved by the OEB. Enbridge Gas notes that amendments are minor and of a “housekeeping” nature.

ATTACHMENT 19



Ontario
Energy
Board | Commission
de l'énergie
de l'Ontario

DECISION AND ORDER

EB-2021-0205

ENBRIDGE GAS INC.

**Application for Leave to Construct Natural Gas Pipeline and
Associated Facilities in the Municipality of Greenstone**

BEFORE: Robert Dodds
Presiding Commissioner

David Sword
Commissioner

March 17, 2022

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1 OVERVIEW

On September 10, 2021, Enbridge Gas Inc. (Enbridge Gas) applied to the Ontario Energy Board (OEB) under section 90 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B) (OEB Act), for an order granting leave to construct a natural gas pipeline and associated facilities in the Municipality of Greenstone (Project). The Project is needed to provide service to the Greenstone Gold Mine near the community of Geraldton, which is located within the Municipality of Greenstone, approximately 270 km northeast of Thunder Bay. The Greenstone Gold Mine is an open pit mine that will be owned and operated by Greenstone Gold Mine LP.

The Project involves:

- 13 km of 6-inch diameter extra high-pressure steel pipeline
- a new metering station
- a rebuild of the existing TransCanada PipeLines Limited/Enbridge Gas custody transfer station

The Project would start at the Enbridge Gas Custody Station located adjacent to the TransCanada pipeline, 3.5 km north of the community of Geraldton and terminate south of TransCanada Highway 11 at the Greenstone Gold Mine site. The general location of the Project is shown on a diagram in Schedule A to this decision and order.

The OEB grants leave to construct a natural gas pipeline and associated facilities as described in the Application, subject to the Conditions of Approval (see Schedule B), based on the following findings:

- there is a need for natural gas service to meet the energy demand of the Greenstone Gold Mine.
- the proposed route for a dedicated pipeline and station facilities to the Project is the preferred route.
- the Project meets the economic test.
- the environmental impacts of the Project are being adequately addressed.
- the OEB approves the forms of landowner agreements related to the construction of the Project.

- Enbridge Gas has satisfied the requirement of the Indigenous Consultation in accordance with OEB's Environmental Guidelines.
- the OEB accepts the Standard Conditions of Approval with modification of condition 2(a)(i) to reduce the construction start notice requirement to 5 days from the current 10 days.

Findings

The OEB is satisfied that the environmental impacts of the Project are being adequately addressed. This is supported by Enbridge Gas's commitment to implement the mitigation measures set out in the Environmental Report and to complete the Environmental Protection Plan prior to the start of construction. The OEB notes that the Ontario Pipeline Coordinating Committee was consulted regarding the Project and did not file any concerns.

The OEB further notes that one of the conditions to this approval requires Enbridge Gas to obtain all approvals and permits necessary for the Project prior to the start of construction.

Minodahmun submitted that Enbridge Gas should incorporate Indigenous Traditional Knowledge in preparation of the Environmental Protection Plan (EPP). The OEB notes that this request was accepted by Enbridge.²⁷

Pollution Probe had expressed concern over elements of the review undertaken by the OPCC and offered suggestions on how it might be improved going forward. The OEB finds the process related to the review by the OPCC to be sufficient for the purposes of this application. However, Pollution Probe may wish to take this issue up directly with the OPCC and also with OEB staff outside this proceeding.

3.5 Landowner Agreements

Enbridge Gas stated that most of the proposed pipeline will be located within existing road allowances. Enbridge Gas provided a list of easements required for the location and construction of the Project, indicating the ownership, type of easement, location, and dimensions²⁸. Regarding permanent easement rights, Enbridge Gas's application indicated that it needs only one permanent easement from Greenstone Gold Mines GP Inc. and potentially another from Canadian North Railway Company. In its reply submission, Enbridge Gas stated that the permanent easement from Canadian North Railway Company would not be required.²⁹

All other land easements required for the Project are for temporary land use rights during construction and restoration after construction. Enbridge Gas stated that it

²⁷ Enbridge Gas Inc. Reply Submission, January 21, 2022 page 16

²⁸ Evidence, Exhibit G, Tab 1, Schedule 1, Attachment 5

²⁹ Enbridge Gas Reply Submission, January 21, 2022, page 12, paragraph 29

would determine specific locations during construction in collaboration with the contractor. Enbridge Gas stated that based on discussions with landowners, it anticipated no issues in acquiring permanent or temporary easement rights for the Project³⁰.

Enbridge Gas filed proposed forms of permanent easement (Pipeline Easement) and temporary easement for OEB approval.³¹ Enbridge Gas indicated that both forms are modified versions of previously approved forms approved by the OEB in Enbridge Gas' 2021-2022 Storage Enhancement Project.³² For comparison, Enbridge Gas filed the marked modified forms to show the changes. Enbridge Gas submitted that the modifications to the forms are "...minor and of housekeeping nature."³³

OEB staff submitted that the OEB should approve the proposed forms of Permanent Easement and Temporary Land Use Agreement as both contain only minor modifications to the forms previously approved by the OEB. No other party commented on the forms of landowner agreement.

Findings

The OEB approves the forms of landowner agreements provided by Enbridge Gas. The OEB notes that the majority of the route is along existing rights-of-way and finds that the land acquisition approach undertaken by Enbridge Gas has been prudent and in keeping with standard forms of landowner agreements for such land uses.

3.6 Indigenous Consultation

In accordance with the process set in the OEB's Environmental Guidelines, Enbridge Gas has been consulting with Indigenous communities potentially affected by the Project. On January 30, 2019, the Ministry of Energy (Ministry)³⁴ formally delegated the procedural aspects of the Crown's duty to consult for the Project to Enbridge Gas

³⁰ Response to I.STAFF.8

³¹ Evidence Exhibit G, Tab 1, Schedule 1, Attachment 1, Attachment 2, Attachment 3, Attachment 4

³² EB-2020-0256

³³ Response to I.STAFF.9 b)

³⁴ Since Enbridge Gas started the Indigenous consultation process on October 30, 2019, the Ministry of Energy has been renamed. It was formerly named Ministry of Energy, Northern Development and Mines and subsequently restructured to Ministry of Energy and Ministry of Northern Development, Mines, Natural Resources and Forestry.