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October 21, 2016

*VIA ELECTRONIC FILING*

**Attention: Kirsten Walli, Board Secretary**

Ontario Energy Board

2300 Yonge Street

27<sup>th</sup> Floor

Toronto, ON M4P 1E4

Dear Madam Secretary:

**RE: Union Gas Ltd. – Panhandle Reinforcement Project – OEB File No. EB-2016-0186  
CAEPLA-PLC Written Evidence  
Our File No. 18162**

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We are the lawyers for CAEPLA-PLC in this proceeding. Please find enclosed CAEPLA-PLC's Written Evidence Statement, including the expert report prepared on behalf of CAEPLA-PLC by Dr. Jane Sadler Richards of Cordner Science.

In response to the request by Union in its letter to the Board dated September 19, 2016 that the oral hearing in this proceeding, if necessary, be held in Leamington, Windsor or Chatham, we can advise that CAEPLA-PLC supports Union's request to hold the oral hearing in Chatham, but not the request to hold the hearing in Leamington or Windsor. The properties affected by the proposed project are located generally to the north and west of Chatham and holding the hearing in Chatham would enhance the opportunity of landowners affected by the project to attend the hearing. However, neither Leamington nor Windsor are in the vicinity of the route of the proposed pipeline.

Also, CAEPLA-PLC would support the scheduling of a settlement conference in this proceeding. CAEPLA-PLC would suggest that any settlement conference be organized so that the landowner issues raised by CAEPLA-PLC's intervention could be dealt with separately from the issues raised by the other intervenors (which deal with ratepayer issues rather than lands issues) and, therefore, more efficiently.

We trust this is satisfactory. If you require any further information, please let us know.

Yours truly,

SCOTT PETRIE LLP  
LAW FIRM

A handwritten signature in black ink, reading "John D. Goudy". The signature is written in a cursive style with a large, stylized "J" and "G".

**John D. Goudy**

Encl.

c.c.: Parties to EB-2016-0186

EB-2016-0186

**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** the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, and in particular, S.36 thereof;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the Township of Dawn Euphemia, Township of St. Clair and the Municipality of Chatham-Kent;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders for approval of recovery of the cost consequences of all facilities associated with the development of the proposed Panhandle Reinforcement Pipeline Project.

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**CAEPLA-PLC WRITTEN EVIDENCE STATEMENT****October 21, 2016**

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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 Panhandle Landowner Committee ("PLC") is a sub-committee of CAEPLA made up of landowners in Lambton County and the Municipality of Chatham-Kent whose lands are directly affected by the Panhandle Reinforcement Project proposed by Union Gas Limited ("Union"). PLC comprises approximately 36 individual owners or ownership groups covering 50

out of the approximately 128 land parcels affected by the project that are not owned by Union itself.

3. CAEPLA-PLC has intervened in this proceeding to ensure that Union's construction methodologies and environmental protection measures are held to the highest standards by the Board. CAEPLA-PLC and its members also have an interest in ensuring that the form of landowner agreement(s) to be approved by the Board pursuant to Section 97 of the *Ontario Energy Board Act* and offered to landowners satisfactorily addresses, *inter alia*, the accommodation of farming practices and issues related to pipeline abandonment.

### **PROPOSED CONSTRUCTION METHODOLOGY – LETTER OF UNDERSTANDING**

4. Union uses a Letter of Understanding ("LOU") to set out commitments made to landowners regarding construction methodology, remediation of affected properties, and various compensation items. As stated in the LOU proposed by Union for the Panhandle Reinforcement Project, Union "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."<sup>1</sup>

5. The LOU has been developed over a number of years through negotiations between Union and landowner groups (principally, the Gas Pipeline Landowners of Ontario or "GAPLO", which is a member association of CAEPLA). In 2006, Union and GAPLO agreed on the form of LOU for the EB-2005-0550 Strathroy-Lobo NPS 48 Pipeline Project, making a number of changes to previous agreements<sup>2</sup>.

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<sup>1</sup> Union Response to CAEPLA-PLC IR 1.5, Attachment 1, page 25 of 46. The full text of the LOU is contained at pages 24-41 of Attachment 1.

<sup>2</sup> EB-2005-0550, Decision and Order dated June 12, 2006; EB-2005-0550 Settlement Agreement between GAPLO-Union (Strathroy-Lobo) and Union Gas Limited dated May 9, 2006 (**Attachment 1**); Transcript of EB-2005-0550 Receipt of Settlement Proposal, May 9, 2006 (**Attachment 2**); EB-2005-0550 Strathroy-Lobo LOU (**Attachment 3**). Note that the Strathroy-Lobo LOU was also used in connection with the NPS 36 Pipeline in EB-2007-0633 (see excerpt from Union Pre-filed Evidence at **Attachment 4**); EB-2007-0633, Decision and Order dated October 19, 2007, page 7.



6. Most recently, the LOU was modified for the EB-2014-0261 Hamilton to Milton NPS 48 Project in part as a result of a settlement agreement between Union and GAPLO and in part as a result of changes ordered by the Board at GAPLO's request in the EB-2014-0261 proceeding<sup>3</sup>.

7. For the Panhandle Reinforcement Project, Union has proposed a form of LOU that includes most of what was approved in the EB-2014-0261 proceeding. However, on review of the project proposal by PLC landowners, there are a number of important construction impact mitigation measures missing from the proposed form of LOU. Some of these measures were originally included in the EB-2005-0550 Strathroy-Lobo LOU and removed by Union for the EB-2014-0261 Hamilton to Milton LOU, and some are new measures being proposed by PLC landowners to address concerns about the project not covered by previous forms of LOU.

8. CAEPLA-PLC's proposed changes to the LOU for the Panhandle Reinforcement Project are set out in the table attached as **Attachment 5** to this written evidence<sup>4</sup>. CAEPLA-PLC's proposed LOU language is contained in the right-hand column of the table, with changes to Union's proposed LOU highlighted in green. The table contains only provisions from the proposed LOU where changes are being proposed by CAEPLA-PLC.

9. Union's proposed Panhandle Reinforcement LOU language is contained in the adjacent column in the table, second from the right. Where Union has included language not found in the EB-2014-0261 Hamilton to Milton LOU, that additional or modified language is highlighted in yellow.

10. The text of the EB-2014-0261 Hamilton to Milton LOU is contained in the middle column of the table. The text of the EB-2005-0550 Strathroy-Lobo LOU is contained in the second column from the left. Language in the Strathroy-Lobo LOU that was changed or removed by Union for the Hamilton to Milton LOU is highlighted in yellow.

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<sup>3</sup> EB-2014-0261, Decision and Order dated April 30, 2015.

<sup>4</sup> CAEPLA-PLC Panhandle LOU Comparison Chart (**Attachment 5**).

11. The far left hand column of the table contains references to equivalent LOU provisions from the 2012 agreement between the Lake Huron Pipeline Landowners Association (“LHPLA”) and the Lake Huron Primary Water Supply System (“LHPWSS”) made in connection with the recent Lake Huron Pipeline construction project through agricultural lands in southwestern Ontario<sup>5</sup>.

12. The LOU updates being proposed by CAEPLA-PLC can be summarized as follows (in the order in which they appear in the LOU):

- a. Soybean Cyst Nematode Protocol to be developed in consultation with the Joint Committee (consisting of Union and PLC members) (page 1, Section 2);
- b. Stakes marking off easement topsoil storage are to be left in place during topsoil stripping operations (page 1, Section 5);
- c. Stakes are to be spray painted or otherwise marked in bright orange (page 1, Section 5);
- d. The easement should be restaked at the request of the landowner where post-construction drainage tile work is being conducted (page 1, Section 5);
- e. Topsoil and subsoil should be piled separately with one metre separation (page 2, Section 6);
- f. Topsoil stripping should be undertaken with an excavator rather than with a bulldozer to ensure accuracy (page 2, Section 6);
- g. Topsoil that has been disturbed by previous Union construction projects should be stripped and piled separately from topsoil that has not previously been disturbed by Union construction projects, with one metre separation between piles (page 2, Section 6);

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<sup>5</sup> Letter of Undertaking between LHPLA and LHPWSS (**Attachment 6**).

- h. At the request of the landowner, a mulch layer should be provided between the stripped topsoil pile and the underlying topsoil where a crop is not present (page 2, Section 6);
- i. At the request of the landowner, distinct subsoil horizons such as blue and yellow clays should be separated, and excess blue clays should be removed from the easement lands (page 3, Section 6);
- j. The pipeline should be installed at a minimum depth of 1.5 metres (5 feet) in agricultural lands (page 3, Section 7);
- k. Additional depth of cover should be provided to accommodate facilities such as drainage where necessary (page 3, Section 7);
- l. Stone-picking should include stones of 50 mm (2 inches) in diameter or greater (page 4, Section 9 and page 5, Section 9);
- m. Post-construction tillage by Union may include cultivation, chisel ploughing and/or deep tilling (page 4, Section 9);
- n. Union should warrant replacement trees for a period of three years (page 11, Section 14);
- o. Trench opened by Union at one time should not exceed 6 km in length (page 11, Section 15);
- p. Union should provide proof of criminal background checks for all company employees, contractors and agents (page 12, Section 15);
- q. Where minors may be present on a property where construction activities are being conducted, Union should provide proof of criminal vulnerable sector background checks for all company employees, contractors and agents (page 12, Section 15);
- r. Union should provide for site specific fixed (non-mobile) emergency stations during construction activities (page 13, Section 15);

- s. Union must secure its work site(s) to prevent unauthorized access and/or to maintain safety, including installation of fencing at the request of the landowner (page 13, Section 15);
- t. Union will import topsoil to remedy any areas affected by construction that have crop losses in excess of 50% in the fifth year following construction (page 14, Section 15);
- u. Union will consult with landowners with respect to farm biosecurity protocols and requirements in effect on affected properties, and Union will conduct its activities in a manner that respects the protocols and requirements in effect (page 16, Section 15);
- v. The Integrity Dig Agreement between Union and GAPLO will apply to all integrity and maintenance operations for the Panhandle Reinforcement Pipeline and for the existing NPS 20 Pipeline, including pipe investigation, repair and replacement, drainage remediation work and depth of cover remediation work (page 16, Section 15 and page 23, Section 30);
- w. Where depth of cover over the pipeline falls below 1.2 metres in agricultural areas, Union will restore depth to a minimum of 1.2 metres (page 17, Section 15);
- x. Union will implement a Joint Committee consisting of Union and PLC representatives for the project in respect of PLC-member properties (page 17, Section 15 and page 23, Schedule to be added);
- y. Landowners will execute a Clean-Up Acknowledgement when satisfied with clean-up operations (page 18, Section 15);
- z. Union will facilitate landowner access to the construction work area upon request (page 18, Section 15);
- aa. Where a dispute arises between Union and a landowner that cannot be resolved through discussion or referral to the Joint Committee, Union may retain a mutually satisfactory independent consultant to assist in dispute resolution (page 19, Section 16);

- bb. Union will assess affected woodlots or hedgerow areas prior to construction and will provide a report to the landowner identifying trees that will be affected (page 19, Section 22);
  - cc. Tree cutting and appraising will be carried out by a qualified forester retained by Union and satisfactory to the landowner, acting reasonably (page 20, Section 22);
  - dd. Union will pay 100% crop loss on gored land (rendered inaccessible or unusable for agricultural purposes during the project) (page 21, Section 23);
  - ee. At the landowner's request, Union will plant a cover crop on gored land (page 21, Section 23);
  - ff. An independent construction monitor shall be appointed for the project by Union, CAEPLA-PLC and Board Staff (page 21);
  - gg. Union will indemnify and hold the landowner harmless from all liability arising from the project except to the extent of gross negligence or wilful misconduct by the landowner (page 22, Section 26);
  - hh. The Joint Committee and Construction Monitor will be involved in the implementation of Union's wet soils shutdown procedures (page 25, Schedule 5); and,
  - ii. Where construction is undertaken in wet soil conditions, Union will pay 150% of disturbance and crop loss compensation on the area affected by the activities (page 27, Schedule 5).
13. CAEPLA-PLC's proposed LOU updates are based on input received from PLC landowners regarding their concerns about construction operations on their properties and on input from Rick Kraayenbrink and Ian Goudy based on their extensive experience with pipeline projects on agricultural lands, including Union projects and the Lake Huron Pipeline<sup>6</sup>.

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<sup>6</sup> EB-2005-0550 Written Evidence of Ian Goudy ([Attachment 7](#)); EB-2005-0550 Written Evidence of Rick Kraayenbrink ([Attachment 8](#)); GAPLO EB-2014-0261 Written Evidence Statement ([Attachment 9](#)); EB-2014-0261 Transcript, Volume 1 ([Attachment 10](#)).

14. CAEPLA-PLC has also obtained the opinion of Dr. Jane Sadler Richards about the appropriateness of construction impact mitigation measures proposed by Union in its form of Panhandle Reinforcement LOU and by CAEPLA-PLC with respect to soils handling, drainage, and the appointment of a construction monitor and joint committee. Her report is attached as **Attachment 11** to this written evidence<sup>7</sup>. Dr. Sadler Richards participated as Construction Monitor on the EB-2005-0550 Strathroy-Lobo NPS 48 Pipeline Project<sup>8</sup>.

15. With respect to its request for minimum depth of cover over the replacement pipeline of 1.5 metres in agricultural lands, CAEPLA-PLC notes that the minimum depth of cover required for the Lake Huron Pipeline was 1.8 metres<sup>9</sup> and that the minimum depth of cover required for the Ultramar Pipeline Saint-Laurent in Quebec was 1.6 metres. Increased depth of cover over the proposed pipeline will provide increased safety and reduce the possibility of interference with present or future agricultural operations.

16. CAEPLA-PLC notes that Union has removed from the EB-2014-0261 form of LOU the requirement to restore depth of cover over the pipeline if it is reduced below a certain minimum level. CAEPLA-PLC proposes that a minimum depth of cover of 1.2 metres in agricultural areas be maintained over the replacement pipeline post-construction.

17. With respect to CAEPLA-PLC's proposals concerning security and background checks for Union employees, contractors and agents working on landowner properties, background checks should be done to ensure that risk for the safety and security of property owners is minimized during and after construction.

18. Where construction activities are taking place in the vicinity of residences and/or in areas where minors may be present (which is the case for multiple PLC-member properties), minors

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<sup>7</sup> Cordner Science, An Opinion Report on Selected Topics in the Panhandle Reinforcement Pipeline Project LOU (**Attachment 11**). Note that Dr. Sadler Richards refers to an earlier version of the CAEPLA-PLC Panhandle LOU Comparison Chart in her report (see **Attachment 12**).

<sup>8</sup> Cordner Science, FINAL REPORT Construction Monitor Services NPS 48 Strathroy Lobo Pipeline Project Union Gas Limited (**Attachment 13**); Union Gas Limited Response to Recommendation by Cordner Science Final Report (**Attachment 14**).

<sup>9</sup> Letter of Undertaking between LHPLA and LHPWSS, Part V, Section 16, page 12 (**Attachment 6**); CPTAQ Decision dated June 25, 2008 (excerpts) (**Attachment 15**).

may come into situations of direct interaction with Union’s employees, contractor and agents. Vulnerable sector background checks will help to ensure the safety of minors during the project and after its completion by denying access by identified individuals to properties where minors may be present.

19. With respect to CAEPLA-PLC’s proposals concerning farm biosecurity protocols and requirements, it is imperative that Union’s construction and operational activities respect those protocols and requirements in place for the protection of the integrity of agricultural operations. A number of PLC members grow vegetables, seed corn and other speciality crops on their properties and are subject to special contractual requirements and certification requirements (including, for instance, CanadaGAP food safety certification for fruits and vegetables)<sup>10</sup>.

20. With respect to CAEPLA-PLC’s proposal for the application of the Union-GAPLO Integrity Dig Agreement<sup>11</sup> to all maintenance operations, PLC 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.

#### **FORM OF LANDOWNER AGREEMENT TO BE APPROVED BY THE BOARD**

21. For properties where Union does not have previously existing permanent easement rights required for the project, Union proposes to offer to landowners an agreement in the form approved by the Board in EB-2014-0261 as part of the Hamilton to Milton NPS 48 Pipeline Project amended to reflect the introduction of CSA Z662-15<sup>12</sup>. CAEPLA-PLC supports Union’s proposed use of the EB-2014-0261 form of agreement.

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<sup>10</sup> CanadaGAP General Brochure (**Attachment 16**).

<sup>11</sup> Union-GAPLO Pipeline System Integrity Dig Agreement (**Attachment 17**).

<sup>12</sup> Union Application, Exhibit A, Tab 11, page 2 of 4, Schedule 3.

22. However, Union has stated in its project application that it “will not be required to obtain a new easement for the construction of the majority of the new NPS 36 pipeline”<sup>13</sup>. The existing NPS 16 pipeline was installed pursuant to blanket easement agreements obtained in 1950 that covered the entirety of affected properties<sup>14</sup>. With one exception, Union subsequently surrendered all but a 15 metre-wide easement on all CAEPLA-PLC member properties<sup>15</sup>.

23. Union’s 1950-era easement agreement omits many of the protections afforded to landowners in more recent forms of agreement, including the EB-2014-0261 agreement. For instance, the 1950-era agreement purports to limit the scope of damages for which compensation would be payable to the landowner and does not contain an indemnity clause.

24. With respect to pipeline abandonment, although the 1950-era agreement contemplates “final removal” of the pipeline or pipelines installed pursuant to the agreement, it does not state clearly that Union is obligated to remove its pipeline(s) from the property when it has been permanently removed from service. As ordered by the Board, the EB-2014-0261 form of agreement includes the abandonment clause that was negotiated by Union and GAPLO and approved by the Board in connection with the Strathroy-Lobo NPS 48 Pipeline Project in EB-2005-0550<sup>16</sup> that requires the removal of Union’s pipelines upon abandonment at the option of the landowner.

25. The requirement for the removal of the pipeline at the landowner’s option is important because it recognizes that the pipeline project is imposed on landowners on the basis that it is in the public interest and that there is minimal regulation of pipeline abandonment in Ontario for provincially-regulated pipelines<sup>17</sup>.

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<sup>13</sup> Union Application, Exhibit A, Tab 11, page 1 of 4.

<sup>14</sup> Union Response to CAEPLA-PLC IR 1.2, Attachment 1.

<sup>15</sup> Union Response to CAEPLA-PLC IR 1.2, Attachment 2.

<sup>16</sup> EB-2014-0261, Decision and Order dated April 30, 2015; EB-2005-0550 Settlement Agreement between GAPLO-Union (Strathroy-Lobo) and Union Gas Limited dated May 9, 2006 (**Attachment 1**).

<sup>17</sup> See EB-2014-0261, Decision and Order dated April 30, 2015; See also GAPLO EB-2014-0261 Written Evidence Statement (**Attachment 9**).



26. CAEPLA-PLC is asking the Board to require that Union's 1950-era easement agreement for the Panhandle Reinforcement Project be updated to reflect current standards and protections for landowners and to ensure consistency for properties affected by the project.

27. CAEPLA-PLC is also asking the Board to order that the one remaining blanket easement that applies to the PLC-member property with Union File No. 122 (PIN 43385-0066 LT) be limited to a width consistent with the 15-metre wide easement for the remaining properties where Union registered partial surrenders.

**PROPOSED CONDITIONS OF APPROVAL**

28. To summarize, CAEPLA-PLC will be requesting that the Board impose the following as conditions of approval of the Panhandle Reinforcement Project:

- a. That the LOU for the project be amended as proposed by CAEPLA-PLC in the table attached as **Attachment 5** or, alternatively, that the proposed amendments be ordered as stand-alone conditions of approval; and,
- b. That Union will offer to PLC landowners an easement agreement in the updated form proposed by Union for this project in replacement of the existing 1950-era easement agreements.

29. This written evidence statement was prepared under the direction of the CAEPLA-PLC Advisory Committee (Dave Core, Rick Kraayenbrink, Carolyn Vsetula, Don Martin, David Apers, Doug Bowen, Dave Lavoie, Dave Van Segbrook and Rob deNijs).

October 21, 2016

**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.

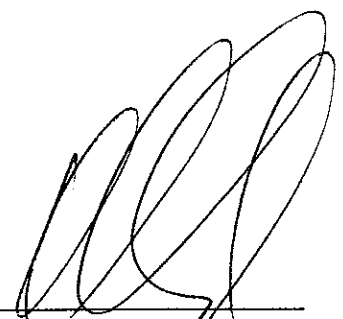
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**SETTLEMENT AGREEMENT**

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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 9<sup>th</sup> day of May, 2006.



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**Paul G. Vogel**  
Counsel for GAPLO-Union  
(Strathroy-Lobo)



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**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
<b>Agricultural production and operations</b> <ul style="list-style-type: none"> <li>• Soil mixing</li> <li>• Drainage</li> <li>• No freeze zone</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased production/ crop maturation/ quality/whole farm price</li> <li>• Loss of drainage system efficiency</li> <li>• Limitations on higher value crops/specialty crops</li> <li>• Operational interference</li> <li>• Income loss</li> <li>• Decreased rental value</li> <li>• Diminished land value</li> </ul>	<ul style="list-style-type: none"> <li>• <b>WSSD – LOU and Schedules 1 and 5 to LOU to be modified as necessary:</b>  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%.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Equipment size/cultivation depth</b></li> </ul>	<ul style="list-style-type: none"> <li>• Decreased efficiency/increased headlands</li> <li>• Increased compaction, crop loss, costs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depth of Cover – to replace the last sentence in Section 1(g) of the LOU -</b>  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</li> </ul>

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> <li>• <b>Stones</b></li> <li>• <b>Construction access</b></li> <li>• <b>Maintenance and repair interference/damage</b></li> </ul>	<ul style="list-style-type: none"> <li>• Annual stone-picking</li> <li>• Equipment damage</li> <li>• Interference with agricultural access</li> <li>• Aggravation of WSSD damage</li> <li>• Ongoing operational interference/loss of productive time and damage from maintenance and repair operations</li> </ul>	<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"> <li>• <b>Stone Picking Practice – Sections 1(k) and 1(m) to be modified as necessary – the second last sentence of Section 1(k) shall read –</b> Stones 50 mm (2") in diameter and larger will be picked by hand and/or with a mechanical stone picker. <b>– Section 1(m) last two sentences are replaced with –</b> 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.</li> <li>• Maximum open trench 6 km.</li> <li>• <b>Damage from pipeline operation –</b> The Integrity Dig Agreement shall apply to all integrity and maintenance operations on whole Dawn-Trafalgar system.</li> </ul>

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> <li>• Cyst Nematode</li> </ul>	<ul style="list-style-type: none"> <li>• Contamination risk</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Cyst Nematode – at Section 8 of the LOU –</b> 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.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Construction impact disputes</b></li> </ul>	<ul style="list-style-type: none"> <li>• Forum for landowner consultation on WSSD and efficient dispute resolution required</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Joint Committee – LOU and Schedule 1 to LOU to be modified as necessary –</b> 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.</li> </ul>
<b>Land use</b>	<ul style="list-style-type: none"> <li>• prevent construction/expansion existing facilities</li> <li>• restrict development intensive</li> <li>• livestock/permitted uses</li> <li>• location limitations / inconvenience / costs</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Easement Agreement: future use – To be inserted after Clause 3 of the easement agreement -</b> 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.</li> </ul>

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> <li>• <b>Non-agricultural</b></li> </ul>	<ul style="list-style-type: none"> <li>• use interference with remaining lands</li> <li>• whole farm income loss</li> <li>• diminished whole farm land value</li> <li>• sterilize land – greenspace</li> <li>• limit development options/increase costs</li> <li>• diminish quality of life</li> <li>• whole property income loss</li> <li>• whole property diminished land value</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Easement Agreement: future use – To be inserted after Clause 3 of the easement agreement -</b> 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.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Socio-economic social/psychological</b></li> </ul>	<ul style="list-style-type: none"> <li>• loss of control over property/environment</li> <li>• violation of personal space</li> <li>• depression/anxiety</li> <li>• loss of enjoyment</li> <li>• diminished quality of life</li> <li>• loss of identification with community</li> <li>• lifetime challenge financially, emotionally and physically</li> </ul>	

IMPACTS	EFFECTS	AGREED PARTIAL MITIGATION MEASURES
<ul style="list-style-type: none"> <li>time loss</li> <li>health and safety</li> <li>abandonment risks</li> </ul>	<ul style="list-style-type: none"> <li>operational interference</li> <li>production and income loss</li> <li>family life disturbance</li> <li>vulnerability/danger/risk</li> <li>operational restrictions</li> <li>decreased self-worth</li> <li>liability</li> <li>liability</li> <li>environmental contamination</li> <li>safety</li> <li>land use restrictions</li> </ul>	<ul style="list-style-type: none"> <li><b>Depth of Cover</b> – 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.</li> <li><b>Abandonment</b> – 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.</li> </ul>



# ONTARIO ENERGY BOARD

**FILE NO.:** EB-2005-0550

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**VOLUME:** Receipt of Settlement  
Proposal

**DATE:** May 9, 2006

**BEFORE:** Cynthia Chaplin                      Presiding Member  
Ken Quesnelle                      Member



EB-2005-0550

THE ONTARIO ENERGY BOARD

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

AND IN THE MATTER OF an Application by 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.

Hearing held at 2300 Yonge Street,  
25<sup>th</sup> Floor, West Hearing Room,  
Toronto, Ontario, on Tuesday,  
May 6, 2006, commencing at 1:30 p.m..

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Receipt of Settlement Proposal  
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B E F O R E:

CYNTHIA CHAPLIN

PRESIDING MEMBER

KEN QUESNELLE

MEMBER

A P P E A R A N C E S

DONNA CAMPBELL

Board Staff

GLENN LESLIE

Union Gas

PAUL VOGEL

GAPLO Union Strathroy-Lobo

JOHN GOUDIE

BARBARA BODNAR

Enbridge Gas Distribution

I N D E X     O F     P R O C E E D I N G S

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--- Whereupon the hearing adjourned at 1:55 p.m.	15

E X H I B I T S

<u>Description</u>	<u>Page No.</u>
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NO EXHIBITS ENETERED DURING THIS HEARING

U N D E R T A K I N G S

<u>Description</u>	<u>Page No.</u>
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NO UNDERTAKINGS ENTERED DURING THIS HEARING

1 Tuesday, May 6, 2006

2 --- Upon commencing at 1:30 p.m.

3 MS. CHAPLIN: Please be seated. Good afternoon,  
4 everyone. The Board is sitting today in the matter of  
5 application EB-2005-0550, submitted by Union Gas Limited  
6 for an order or orders granting leave to construct a  
7 natural gas pipeline and ancillary facilities in the  
8 Township of Strathroy-Caradoc and in the Township of  
9 Middlesex Centre, all in the County of Middlesex.

10 The parties to this proceeding have recently ended a  
11 settlement conference and earlier today filed a settlement  
12 proposal reflecting the participants' positions. The  
13 purpose of today's hearing is for the Board to receive a  
14 settlement proposal and to rule on its acceptability.

15 My name is Cynthia Chaplin, and I will be the  
16 presiding member in this hearing, and joining me on the  
17 panel is Board member Mr. Quesnelle.

18 May I have appearances, please?

19 **APPEARANCES:**

20 MR. LESLIE: Good afternoon. My name is Glenn Leslie.  
21 I am counsel to Union Gas.

22 MS. CHAPLIN: Good afternoon, Mr. Leslie.

23 MR. VOGEL: Good afternoon, Madam Chair. My name is  
24 Paul Vogel. I am counsel for GAPLO Union Strathroy-Lobo,  
25 one of the intervenors. With me is Mr. John Goudy, my  
26 co-counsel.

27 MS. CHAPLIN: Thank you, Mr. Vogel. Would anyone else  
28 like to --

1 MS. BODNAR: Barbara Bodnar for Enbridge Gas  
2 Distribution.

3 MS. CHAPLIN: Thank you.

4 MS. CAMPBELL: Donna Campbell for the Ontario Energy  
5 Board, and I am assisted by Zora --

6 MS. CRNOJACKI: Crnojacki.

7 MS. CAMPBELL: Thank you.

8 MS. CHAPLIN: Thank you, Ms. Campbell.

9 Before we begin, are there any preliminary matters  
10 before we turn to the settlement proposal, Ms. Campbell?

11 MS. CAMPBELL: I don't believe there are any.

12 MS. CHAPLIN: Okay, thank you. Perhaps we will begin  
13 with Mr. Leslie, if you want to present the settlement  
14 proposal.

15 **SUBMISSIONS BY MR. LESLIE:**

16 MR. LESLIE: Yes, thanks very much. As the Board  
17 knows, I believe, as a result of discussions over the last  
18 couple of days, we have reached an agreement with the GAPLO  
19 landowners, which you have. This agreement deals with the  
20 issues that were raised by GAPLO in these proceedings. We  
21 also have an agreement with them on compensation, which is  
22 a separate matter.

23 But the agreement you have deals with the issues that  
24 were raised in these proceedings. The agreement  
25 contemplates -- I will just mention one aspect of it. It  
26 contemplates the appointment of a construction monitor, and  
27 that -- the idea there was to really do something similar  
28 to what had been done in an earlier case. It is EBL-0234.

1 This is a variation on that theme, but that was where we  
2 got the idea from.

3 There were criteria used in that case. They're  
4 appendix C to the decision. I simply wanted to say that it  
5 was our expectation, I guess, that those criteria would be  
6 used in this case, as well.

7 The agreement does contemplate the participation of  
8 Board Staff in the appointment of that individual.

9 I should probably advise the Board that there are a  
10 number of other landowners who are not represented by Mr.  
11 Vogel. I can tell the Board that with respect to those  
12 landowners, to the extent that they have not signed  
13 agreements or agreed to, the only issues relate to  
14 compensation. There are no issues relating to the proposal  
15 as it relates to the pipeline or the application that is  
16 before you.

17 Board Staff have given us their proposed conditions of  
18 approval and they are acceptable.

19 Finally, I guess my understanding was that we had been  
20 advised, through Board Staff, that it would not be  
21 necessary for Union to have either of the two panels that  
22 we planned to have available, if there had been a hearing,  
23 testify or appear, and it was also my understanding that  
24 the Board, subject to reviewing the agreement and being  
25 satisfied with it, would be in a position to issue a  
26 decision on the application before you. I would ask you to  
27 do that as soon as possible.

28 There are reasons set out in the evidence, but,



1 briefly, it is a matter of satisfying the people who  
2 contracted with us that we are going ahead, and there is  
3 also a need to order pipe relatively soon.

4 I think that is all I have. Thank you very much.

5 MS. CHAPLIN: Okay. Thank you, Mr. Leslie. Mr. Vogel  
6 do you have any additional comments?

7 **SUBMISSIONS BY MR. VOGEL:**

8 MR. VOGEL: No, Madam Chair. I think it is the basis  
9 of the settlement you have in schedule 1 attached to the  
10 settlement agreement. You will see there that with respect  
11 to the impacts and the effects of the proposed pipeline  
12 construction, that we have been able to resolve at least  
13 partial mitigation measures with respect to some of those  
14 impacts and effects. And, as you are aware, as a result of  
15 the decision at Issues Day, compensation structure and  
16 compensation issues are not before you here.

17 So it appears that we have been successful in  
18 resolving whatever could be resolved, by way of partial  
19 mitigation measures, to address part of the impacts and  
20 effects which will be created by this proposed pipeline  
21 construction.

22 MS. CHAPLIN: Thank you. Before I turn to Ms.  
23 Campbell, is there any other comments? Ms. Campbell, does  
24 Board Staff have any comments or questions?

25 **SUBMISSIONS BY MS. CAMPBELL:**

26 MS. CAMPBELL: I have a handful of comments and  
27 questions concerning the form itself.

28 The first thing that I would like to know is I am

1 going to ask Mr. Leslie -- I alerted him to the fact that  
2 this question would be asked. I am wondering if Union is  
3 in a position to advise the Panel of the cost impact of the  
4 steps that are contained in the schedule 1 attached to the  
5 settlement agreement.

6 MR. LESLIE: Yes. It is roughly a quarter of a  
7 million dollars.

8 MS. CAMPBELL: Thank you.

9 MS. CHAPLIN: Just because I don't have the number on  
10 the top of mind, what is that roughly as a percentage of  
11 the total project?

12 MR. LESLIE: It would be less than 1 percent, I would  
13 think. It is \$50 million project.

14 MS. CHAPLIN: Thank you very much.

15 MR. LESLIE: Sorry, the 50 is for pipe. It is a \$100  
16 million project.

17 MS. CHAPLIN: Thank you.

18 MS. CAMPBELL: The next question that I have, it is  
19 really a clarification. I notice that the manager of  
20 facilities is here to make sure that I get this right. In  
21 the opening paragraph, if everybody would look under WSSE,  
22 there is the statement that an independent construction  
23 monitor shall be appointed by GAPLO Union, the company and  
24 Ontario Energy Board staff.

25 I simply wish to confirm that the Energy Board's  
26 involvement is in assisting in the appointment of the  
27 monitor, but no one from the Board will be going into the  
28 field to check on the monitor.

1           However, the Board will be receiving the reports that  
2   are referenced in the upper third of that paragraph. In  
3   other words, the sentence I'm referring to, "The monitor  
4   shall file interim and final reports with the OEB." So I  
5   wish to clarify that and ensure that that is everybody's  
6   understanding while we're in the room.

7           MR. VOGEL: That's correct, Ms. Campbell.

8           MR. LESLIE: Yes, that is correct.

9           MS. CAMPBELL: Thank you.

10          MR. LESLIE: I think Mr. McKay played this role the  
11   last time it was done.

12          MS. CAMPBELL: Yes. And he is here to make sure it is  
13   pretty defined, so I think we have justified it. The other  
14   issue that I raised before the Panel came into the room has  
15   to do with the timing of the filing of the reports. No one  
16   had actually -- at least I haven't and I hadn't heard it  
17   discussed in my hearing, and I am assuming no one else has  
18   turned their mind to the actual filing of the report, and  
19   what we were discussing -- and Mr. Vogel seemed to be  
20   amenable to this. I haven't discussed it with Mr. Leslie -  
21   - was those reports, the -- that particular report by the  
22   independent construction monitor on the issues in that  
23   paragraph would be filed -- sorry, and the other issues on  
24   which the independent construction monitor's report, those  
25   reports would come in at the same time as the reports that  
26   Union generally files, the other reports that Union must  
27   file.

28          I appreciate I haven't discussed this with Union, so I

1 am going to ask Mr. Leslie if he could canvas his clients  
2 and determine if that is appropriate.

3 MR. LESLIE: Apparently last time they were on a  
4 slightly different schedule, that is the monitor's reports  
5 were filed at a different time than post-construction  
6 reports. But I don't see any reason why that couldn't be  
7 coordinated, if that was important.

8 MS. CAMPBELL: This is probably a question that is  
9 more theoretical than anything right now because nobody  
10 knows how much they're going to file. Any concept of  
11 reporting times you are thinking of?

12 MR. VOGEL: I don't think the -- probably our best  
13 contemplation at this point in time is that the  
14 construction monitor would file reports as per the draft  
15 conditions of approval, timing for Union. Subject to, I  
16 suppose, the monitor having the discussion to file reports  
17 at other times if the monitor thought that was appropriate.

18 MS. CAMPBELL: How does that sound?

19 MR. LESLIE: That's fine.

20 MS. CAMPBELL: Okay.

21 All right. I just had something raised with me and I  
22 just want to clarify it to make sure, so that everybody's  
23 concerns in the room are addressed. Just to confirm the  
24 limited role of Board Staff, probably because this is  
25 someone who would be affected by this. The limited role of  
26 Board Staff, in that if there is a dispute, that the  
27 dispute would be dealt with by the joint committee and not  
28 by the Board.

1           MR. VOGEL: That's correct. The contemplation -- the  
2 joint committee is established as a dispute resolution  
3 mechanism.

4           MS. CAMPBELL: Right.

5           MR. VOGEL: I think the schedule 1 provides for the  
6 joint committee to do its work in consultation with the  
7 monitor. So that is the contemplated forum in which  
8 disputes would be resolved.

9           MS. CAMPBELL: Thank you. My next question comes from  
10 page 3, construction impact disputes.

11           It is under joint committee LOU. So the first point  
12 beside construction impact disputes. And it is the second  
13 sentence from the top and I asked this question of Mr.  
14 Vogel before we started. I just would like you to explain  
15 to the panel how the one other landowner would be  
16 appointed.

17           MR. VOGEL: Oh, the make-up of the joint committee  
18 includes two landowners, one of whom is a Gaplo-Union  
19 representative. As Mr. Leslie has indicated to you, Madam  
20 Chair, there are other landowners who don't belong to  
21 Gaplo-Union, so there is provision on the joint committee  
22 for those other landowners to also be represented by one of  
23 the non-Gaplo-Union landowners.

24           I presume that that landowner would be appointed by  
25 Union consulting with the other non-Gaplo landowners, and  
26 determining an appropriate representative.

27           MS. CAMPBELL: There is also reference to a honorarium  
28 to be paid. Does the other landowner get an honorarium

1 also, is that the subject of --

2 MR. LESLIE: That is our expectation. Mr. Vogel  
3 didn't negotiate that, but we assume that if we paid one,  
4 we would probably pay the other.

5 MS. CAMPBELL: Okay, thank you.

6 My next question arises from page 4. It has the  
7 heading socio-economic and there are two bullet points, one  
8 on page 4, social/psychological; the second at the top of  
9 Page 5, time loss.

10 There is nothing under the agreed partial mitigation  
11 measures. I am correct, am I, that because it is blank  
12 that means there are no agreed partial mitigation measures  
13 for these topics?

14 MR. VOGEL: That's correct, Ms. Campbell.

15 MS. CAMPBELL: Can you explain to the Panel the  
16 purpose of filing the form with the empty column.

17 MR. VOGEL: Well, the schedule itself, I think the  
18 panel is familiar with the form as it has evolved through  
19 the course of this hearing, identifies construction impacts  
20 and effects from the proposed pipeline construction,  
21 residual effects and cumulative effects, some of which are  
22 at least addressed in part now through the agreed partial  
23 mitigation measures, and the schedule simply, I think,  
24 summarizes the prefiled evidence from Gaplo with respect to  
25 what those effects are. To the extent they're being dealt  
26 with in this hearing, indicates what the agreed partial  
27 mitigation measures are.

28 MS. CAMPBELL: I guess I didn't phrase my question

1 particularly well.

2 If there is no agreed partial mitigation measure that  
3 can be taken, why is it included in this form?

4 MR. VOGEL: I think for the sake of completeness. I  
5 mean that's the way the hearing is resolved.

6 MR. VOGEL: Those are the impacts and effects  
7 identified in the evidence, and to the extent that we have  
8 been able to develop agreed mitigation measures, that's the  
9 subject of a settlement agreement in this proceeding.

10 MS. CAMPBELL: Right. So do I take it the fact that  
11 it is blank means that it is dealt with by compensation  
12 only? Those are compensatory matters as opposed to matters  
13 in which mitigation measures can be taken in part or in  
14 whole?

15 MR. VOGEL: If they were to be addressed, they would  
16 be addressed through compensation.

17 MS. CAMPBELL: Okay.

18 MR. VOGEL: That's correct.

19 MR. LESLIE: It may be important to understand how  
20 this document evolved. I don't know, but I mean the first  
21 two columns have always been there. Previously there were  
22 two other columns. One was what Mr. Vogel was proposing  
23 and the fourth column had to do with compensation.

24 For purposes of this afternoon, what Mr. Vogel, after  
25 talking to us, was to condense the second -- the third and  
26 fourth column into what you now see in the agreed partial  
27 mitigation measures so that you knew what we agreed to deal  
28 with the issues.

1           The first two columns are really just what was there  
2   in the first place.

3           MR. VOGEL:  As I think I explained in my opening  
4   remarks, Madam Chair, as a result of the determination at  
5   issues day that compensation structure is not in issue this  
6   proceeding.  We have not addressed compensation structure  
7   in the context of this proceeding.  And therefore, what we  
8   are presenting to you today is the extent that we have been  
9   able to agree on the partial mitigation measures for the  
10  identified impacts and effects.

11          MS. CHAPLIN:  So perhaps just for our purposes, could  
12  I kind of summarize that as -- I guess the way that the  
13  Panel is looking at it is:  What represents the settlement  
14  is in fact what appears in the third column?

15          MR. LESLIE:  That is right.

16          MS. CHAPLIN:  That is in effect the settlement  
17  agreement.  To the extent there is information in the first  
18  two columns, that is the rationale or the underlying - and  
19  to the extent there is nothing in the agreed column for  
20  those two categories, nothing turns on the fact that there  
21  is something there in the first two columns, really, it is  
22  not part of the settlement?

23          MR. LESLIE:  I think that is right.  There is another  
24  agreement dealing with compensation that is material to  
25  your understanding.

26          MR. VOGEL:  But the fact they appear in the first two  
27  columns and there is nothing beside them in the third  
28  column would simply indicate, in my submission to you, that



1 they are not being addressed here through partial  
2 mitigation measures. I think that is what you can take  
3 from this schedule.

4 MS. CHAPLIN: Okay. Thank you.

5 MS. CAMPBELL: So I take it, then, that the parties  
6 are content -- although these issues are not being  
7 addressed by this document at all -- to leave it there?  
8 That is really my real question.

9 MR. VOGEL: We are content in the context of the  
10 proceeding as it was structured at issues day, to proceed  
11 on the basis of this settlement because these are the  
12 issues which were capable of settling in the context of  
13 this proceeding.

14 MS. CAMPBELL: Okay. I have one other question --  
15 two, actually. Well, it can be said in one but it has two  
16 parts to it.

17 This has to do with simply completing the record.  
18 There is reference in here to amendments to the letter of  
19 understanding and amendments to the easement. Is it the  
20 intention of the parties to file an amended form of the  
21 easements and an amended letter of understanding? They are  
22 part of the pre-filed evidence already, and that simply why  
23 I'm asking.

24 MR. LESLIE: No, but that certainly can be done.

25 MS. CAMPBELL: Well, the Panel has to approve the form  
26 of an easement.

27 MR. LESLIE: I frankly hadn't thought about it, but  
28 you are right, they have to prove the form of the easement,

1 and that means that the changes that are contemplated by  
2 this document would have to be in an easement that was in  
3 evidence and we will look after that, yes.

4 MS. CAMPBELL: Thank you. Do you intend to amend and  
5 file a letter of understanding? The reason I am asking is  
6 simply you have already pre-filed it, so if you could do  
7 that also, because this document makes reference to it,  
8 also.

9 MR. LESLIE: Yes, of course.

10 MS. CAMPBELL: Thank you. Those are my questions.

11 MS. CHAPLIN: Thank you. Mr. Quesnelle?

12 **QUESTIONS FROM THE BOARD:**

13 MR. QUESNELLE: Board Staff has basically covered off  
14 anything I have, so I am satisfied. I don't have anything  
15 else, Madam Chair.

16 MS. CHAPLIN: Thank you. Ms. Campbell, can you  
17 confirm that intervenors have been given notice of this  
18 settlement, and have there been any comments or...

19 MS. CAMPBELL: No, no. Last night I indicated, by  
20 e-mail, that it was likely that a settlement proposal on  
21 some or all of the issues would be tendered before the  
22 Board today. I optimistically had said 9:30 or shortly  
23 thereafter. I expanded the definition of "shortly  
24 thereafter", but there has been no response and no  
25 indication, that I am aware of, that anyone seeks to come  
26 and address you on this.

27 MS. CHAPLIN: And save and aside for this settlement  
28 agreement, is it your understanding -- are there any other

1 outstanding issues in this proceeding? Is there any  
2 requirement, from your perspective, for Union's panels to  
3 appear for any further evidence to be heard?

4 MS. CAMPBELL: I am pausing for effect, just to make  
5 everybody nervous.

6 No. No, there isn't.

7 MS. CHAPLIN: One moment, please.

8 [Board Panel confers]

9 MS. CHAPLIN: Thank you. The Panel has conferred and  
10 we are -- we accept the settlement as it has been  
11 presented, and bearing in mind Mr. Leslie's comments, we  
12 will issue a decision and order as soon as practical, after  
13 receiving the amended agreements.

14 Are there any final matters? Mr. Leslie, Ms.  
15 Campbell?

16 MS. CAMPBELL: No. I would just like to thank the  
17 parties for their persistence over the last two-and-a-half  
18 days. I have only been privy to some of it, but I must say  
19 that the Board Staff is certainly content with the proposal  
20 that was put forward and commends the parties for their  
21 efforts.

22 MS. CHAPLIN: Thank you.

23 MR. LESLIE: Thank you for your patience.

24 MS. CHAPLIN: Oh, well, that was easy for us.

25 The Board would also like to thank the parties for the  
26 hard work they obviously put in and the cooperative  
27 approach they took. We would like to thank Board Staff for  
28 the contributions you made to the settlement, and also we

1 would like to thank the reporters for remaining on call for  
2 such an extended period of time. We do appreciate their  
3 flexibility.

4 If we have nothing further, we are adjourned and we  
5 will issue the decision in due course. Thank you very  
6 much.

7 --- Whereupon hearing the adjourned at 1:55 p.m.

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**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

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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

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:

$$\begin{aligned} \text{Present Value} &= \frac{\text{Payment}}{\text{Interest}} \quad \text{Thus, Lump Sum} = \\ &(\text{Sixth Year \% Crop Loss}) + \\ &\frac{(\% \text{ Crop Loss} \times \text{Average Crop Price Per Acre} \times \text{Acreage})}{\text{CSB Rate}} \end{aligned}$$

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.



**NPS 48 STRATHROY-LOBO Project  
Letter of Understanding**

Page 13

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**

**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 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. ( 36% Easement Area )   |
| <input type="checkbox"/> | <input type="checkbox"/> | (d) | Topsoil Storage Land Use @ | \$ | per acre ( for area exceeding 36% of Easement Area )<br>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<br>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<br>(100% loss in year of construction )<br>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"/> | <input type="checkbox"/> | b) Attached as Appendix "B" any other special requirements or compensation issues. |

Initialled for identification by owner(s): \_\_\_\_\_.

Approval (Union Gas Limited): \_\_\_\_\_.

**NPS 48 STRATHROY-LOBO Pipeline**

APPENDIX "B" SETTLEMENT

Property No.: \_\_\_\_\_, Landowner(s):

**NPS 48 STRATHROY-LOBO Pipeline**

## 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.

## SCHEDULE 2

**NPS 48 STRATHROY-LOBO Pipeline****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.

NPS 48 STRATHROY-LOBO Pipeline

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 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.



NPS 48 STRATHROY-LOBO Pipeline

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 Companys' 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.

**NPS 48 STRATHROY-LOBO Pipeline****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.**

**SECTION 6****LAND MATTERS****NPS 36 Pipeline**

68. The proposed NPS 36 pipeline connects to the 156 Compressor Station at Lot 31, Concession 1, Dawn-Euphemia Township, and runs southerly to Dawn in Lot 26, Concession 2, Dawn-Euphemia Township.
69. Union requires approximately 6.0 hectares of permanent easement for the proposed pipeline. Section 6-Schedule 1 lists the names and addresses of all affected landowners and the dimensions of the permanent easements required. As of the date of filing, Options for the four permanent easements have been obtained.
70. Union's Grant of Easement form which is attached as Section 6-Schedule 2 is the form developed following the EB-2005-0550 Strathroy-Lobo TFEP hearing.
71. Union will require approximately 2.0 hectares of temporary easement for the proposed construction. The affected landowners and dimensions of temporary easement are also outlined in Section 6-Schedule 1. Union will employ the Temporary Land Use Agreement form previously approved by the Board and used by Union in the past on pipeline projects. These agreements are for a period of two years. This period allows Union an opportunity to return following construction to perform further clean-up work as required.
72. At the conclusion of construction, Union will seek a Full and Final Release from each of the directly affected landowners. This Release covers any compensation for actual damages resulting from the pipeline construction.
73. Union will also use a Letter of Understanding ("LOU") between Union and landowners for the project, and specifically the form of the LOU employed in the Strathroy-Lobo project referred to in paragraph 70. The LOU outlines compensation, damage mitigation, clean-up, and restoration policies to be implemented for the project. It also constitutes a framework for

individual landowner negotiations. The LOU is structured so that common concerns can be addressed in a consistent and mutually-acceptable fashion.

74. The LOU provides a benchmark for individual negotiations for land rights. If necessary, updates or site-specific reports by mutually-acceptable appraisers will be paid for by Union to resolve questions of land values.
75. During individual negotiations with affected landowners, property-specific matters of compensation for land rights and anticipated damages, as well as site-specific mitigation measures will be settled. These measures are documented in the LOU.

**Well Drilling, Roads and Gathering Lines**

76. Drilling of wells, construction of roadways, and construction of gathering pipelines within the DSA will be undertaken pursuant to existing Storage Lease Agreements with the landowners.
77. In the 156 Pool, wells will be drilled on the Ronald and Richard Clubb, Adelle Stewardson and Frank and Martha Wilson properties. The 59-85 Pool wells will be drilled on properties owned by Eunice Aitken and Lisa Pleau and Union Gas Limited. The location of wells can be found in Section 4-Schedules 1 and 2. Copies of the Storage Lease Agreements for these landowners can be found at Section 6-Schedule 3.
78. Permanent all-weather roadways are required to accommodate vehicular traffic to the existing and proposed well locations and will be used on an ongoing basis during and following construction. These access roads will be used where possible for construction and maintenance of the gathering pipelines in order to minimize environmental disturbance. The location of the access roads is shown in Section 6-Schedule 4.
79. Letters of Acknowledgement stating that there is no objection to the commencement of drilling of the wells and construction of the permanent all-weather access roads in the locations proposed have been presented to each landowner. Signed Letters of Acknowledgment have been received from all landowners and are included as Section 6-Schedule 4.

**Additional Property Identifier(s) and/or Other Information**

This is an Easement in Gross

**EASEMENT FOR TRANSMISSION PIPELINE**

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

WHEREAS the Transferee is the owner in fee simple of those lands and premises (hereinafter called the "Transferee's lands") situate, lying and being in the geographic Township of Dawn, now Township of Dawn-Euphemia, in the County of Lambton and Province of Ontario and being composed of the west half (w1/2) of Lot Number 25 in the 2nd Concession of the said Township.

The Transferor (and the Mortgagee) do hereby GRANT, CONVEY, TRANSFER AND CONFIRM unto the Transferee, its successors and assigns, to be used and enjoyed as appurtenant to all or any part of the lands of the Transferee's lands the right, liberty, privilege and easement on, over, in, under and/or through a strip of the Transferor's lands more particularly described in Box 5 of page one of this Schedule (hereinafter referred to as the "Lands") to survey, lay, construct, maintain, inspect, patrol, alter, remove, replace, reconstruct, repair, move, keep, use and/or operate one pipe line for the transmission of pipeline quality natural gas as defined in The Ontario Energy Board Act S.O. 1998 (hereinafter referred to as the "Pipeline") including therewith all such buried attachments, equipment and appliances for cathodic protection which the Transferee may deem necessary or convenient thereto, together with the right of ingress and egress at any and all times over and upon the Lands for its servants, agents, employees, those engaged in its business, contractors and subcontractors on foot and/or with vehicles, supplies, machinery and equipment for all purposes necessary or incidental to the exercise and enjoyment of the rights, 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 (\$) of lawful money of Canada (hereinafter called the "Consideration"), which sum is payment in full for the rights and interest hereby granted and for the rights and interest, if any, acquired by the Transferee by expropriation, including in either or both cases payment in full for all such matters as injurious affection to remaining lands and the effect, if any, of registration on title of this document and where applicable, of the expropriation documents, subject to Clause 12 hereof to be paid by the Transferee to the Transferor at least 30 days prior to the exercise by the Transferee of any of its rights hereunder other than the right to survey, 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 and following such surrender Transferee shall remove all debris as may have resulted from the Transferee's use of the Lands from the Lands and in all respects restore the Lands to 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. This provision shall apply with respect to all Pipelines in the Dawn-Trafalgar system on the Transferor's Lands.

2. The Transferee shall make to the Transferor (or the person or persons entitled thereto) due compensation for any damages to the Lands resulting from the exercise of any of the rights herein granted, and if the compensation is not agreed upon by the Transferee and the Transferor, it shall be determined by arbitration in the manner prescribed by the Expropriations Act, R.S.O. 1990, Chapter E-26 or any Act passed in amendment thereof or substitution therefor. Any gates, fences, municipal drains, and tile drains 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.

FOR OFFICE  
USE ONLY

**Additional Property Identifier(s) and/or Other Information**

3. The Pipeline (including attachments, equipment and appliances for cathodic protection but excluding valves, take-offs and fencing installed under Clause 9 hereof) shall be laid to such a depth that upon completion of installation it will not obstruct the natural surface run-off from the Lands nor ordinary cultivation of the Lands nor any tile drainage system existing in the Lands at the time of installation of the Pipeline nor any planned tile drainage system to be laid in the Lands in accordance with standard drainage practice, if the Transferee is given at least thirty (30) days notice of such planned system prior to the installation of the pipeline; provided that the Transferee may leave the pipeline exposed in crossing a ditch, stream, gorge or similar object where approval has been obtained from the Ontario Energy Board or other Provincial Board or authority having jurisdiction in the premises. The Transferee agrees to make reasonable efforts to accommodate the planning and installation of future tile drainage systems following installation of the pipeline so as not to obstruct or interfere with such tile installation.

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.

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

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

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

7. Except in case of emergency, the Transferee shall not enter upon any lands of the Transferor, other than the Lands, without the consent of the Transferor. In case of emergency the right of entry upon the Transferor's lands for ingress and egress to and from the Lands is hereby granted. The determination of what circumstances constitute an emergency, for purposes of this paragraph is within the absolute discretion of the Transferee, but is a situation in which the Transferee has a need to access the pipeline in the public interest without notice to the Transferor, subject to the provisions of paragraph 2 herein. The Transferee will, within 72 hours of entry upon such lands, advise the Transferor of the said emergency circumstances and thereafter provide a written report to Transferor with respect to the resolution of the emergency situation.

8. The Transferor shall have the right to fully use and enjoy the Lands except for planting trees over a six (6) metre strip centered over the Pipeline, and except as may be necessary for any of the purposes hereby granted to the Transferee, provided that without the prior written consent of the Transferee, the Transferor shall not with mechanical equipment or explosives excavate, drill, install, erect or permit to be excavated, drilled, installed or erected in, on, over or through the Lands any pit, well, foundation, pavement, building, mobile homes or other structure or installation. Notwithstanding the foregoing the Transferee upon request shall consent to the Transferor erecting or repairing farm 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 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 three (3) clear days notice in writing pointing out 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.

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**Additional Property Identifier(s) and/or Other Information**

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 therefor. The Transferee agrees to make all reasonable efforts to locate such facilities adjacent to lot lines and public road allowances. The Transferee shall keep down weeds on any lands removed from cultivation by reason of locating any valves and/or take-offs in the Lands.

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

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

12. The Transferor covenants that he has the right to convey this easement notwithstanding any act on his part, that he will execute such further assurances of this easement as may be requisite and which the Transferee may at its expense prepare and that the Transferee, performing and observing the covenants and conditions on its part to be performed, shall have quiet possession and enjoyment of the rights, privileges and easement hereby granted. If it shall appear that at the date hereof the Transferor is not the sole owner of the Lands, this Indenture shall nevertheless bind the Transferor to the full extent of his interest therein and shall also extend to any after-acquired interest, but all moneys payable hereunder shall be paid to the Transferor only in the proportion that his interest in the Lands bears to the entire interest therein.

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

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

15. The rights, privileges and easement hereby granted are and shall be of the same force and effect as a covenant running with the land and this Indenture, including all the covenants and conditions herein contained, shall extend to, be binding upon and enure to the benefit of the heirs, executors, administrators, successors and assigns of the Parties hereto respectively; and, wherever the singular or masculine is used it shall, where necessary, be construed as if the plural, or feminine or neuter had been used, as the case may be. The Transferee shall not assign this agreement without prior written notice to the Transferor and, despite any such assignment, the Transferee shall remain liable to the Transferor for the performance of its responsibilities and obligations hereunder.

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16. The Mortgagee in Mortgage/Charge Number \_\_\_\_\_, in consideration of the sum of Two Dollars (\$2.00) the receipt whereof is hereby acknowledged, joins herein for the purpose of consenting hereto and agrees to the easement hereby granted and covenants that the Transferee shall have quiet possession of the rights, privileges and easements hereby granted. The Mortgagee certifies that the Mortgagee is at least eighteen years old.

\_\_\_\_\_  
(Name of Mortgagee)

Witness:

(Per: \_\_\_\_\_)

Date of Signature \_\_\_\_\_

(Per: \_\_\_\_\_)

Date of Signature \_\_\_\_\_

"I/we have authority to bind the corporation."

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## Additional Property Identifier(s) and/or Other Information

Municipality of Chatham-Kent

Province of Ontario

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

I, Beverly Howard Wilton, of the Municipality of Chatham-Kent, in the Province of Ontario.

DO SOLEMNLY DECLARE THAT

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

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

DECLARED before me at the  
Municipality of Chatham-Kent,  
in the Province of Ontario  
this      day of      , 2005

A Commissioner, etc.

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USE ONLY

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p><b>8. TESTING FOR SOY BEAN CYST NEMATODE</b> 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, <b>the Joint Committee</b> 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><b>2. Testing For Soybean Cyst Nematode</b> 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><b>2. Testing For Soybean Cyst Nematode</b> 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><b>2. Testing For Soybean Cyst Nematode</b> 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, <b>in consultation with the Joint Committee</b>, 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><b>V.16(e) – Staking of Work Space</b></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.</p> <p><b>Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation.</b></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 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><b>The Company will restake the easement limit for post construction tile work at the request of the landowner.</b></p>	<p><b>3. Staking of Work Space</b> 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 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>5. <b>Staking of Work Space</b> 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 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>5. <b>Staking of Work Space</b> 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><b>Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation.</b></p> <p>The stakes will be located at 30 metre (98.4 foot) intervals prior to construction <b>and will be spray painted or otherwise marked in bright orange.</b> 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.</p> <p><b>The Company will restake the easement limit for post construction tile work at the request of the landowner.</b></p>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
<p>III.10(a) – Topsoil Stripping</p> <p>III.10(b) – Existing Crown from Original Construction</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 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><b>4. Topsoil Stripping</b></p> <p>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. <b>Topsoil Stripping</b></p> <p>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. <b>Topsoil Stripping</b></p> <p>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 <b>with one metre separation</b> 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><b>Topsoil stripping will be conducted using an excavator and not a bulldozer.</b></p> <p><b>Topsoil previously disturbed by pipeline construction will be stripped and piled separately from virgin topsoil, with one metre separation between piles.</b></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><b>At the request of a landowner a mulch layer will be provided between the existing topsoil and the stripped topsoil piles in situations where a crop is not present.</b></p>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<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>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 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>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>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><b>V.16(a) – Depth of Cover</b> LHPWSS will install the 2011 Twinning pipeline with at least 1.8 metres of cover.</p> <p>If LHPWSS, acting reasonably, determines in consultation with the landowner that it is necessary to increase the depth of the 2011 Twinning pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, LHPWSS will provide for additional depth of cover.</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 <b>drainage expert</b> that it is necessary to increase the depth of the Pipeline to accommodate facilities such as <b>drainage</b>, processes such as deep tillage, heavy farm equipment or land use changes, Union will provide for additional depth of cover.</p>	<p><b><u>7. Depth of Cover</u></b> 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><b><u>7. Depth of Cover</u></b> 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><b><u>7. Depth of Cover</u></b> The Company will install the pipeline with a minimum of <b>1.5 metres of cover</b>, except where bedrock is encountered at a depth less than <b>1.5 metres</b>, 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 <b>facilities such as drainage and/or</b> processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover</p>
<p><b>III.10(c)</b> Topsoil Restoration</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</p>	<p><b><u>9. Topsoil Replacement, Compaction Removal and Stone Picking</u></b></p> <p>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><b><u>9. Topsoil Replacement, Compaction Removal and Stone Picking</u></b></p> <p>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><b><u>9. Topsoil Replacement, Compaction Removal and Stone Picking</u></b></p> <p>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>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p>a mechanical stonepicker. The subsoil on the easement will be tilled again as above.</p> <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>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 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 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 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 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 50 mm (2 inches) in diameter. After topsoil replacement, the topsoil will be tilled 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, 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 3.</p>



LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p><b>6.5 STONEPICKING</b></p> <p>The Company shall, at a time satisfactory to the landowner, pick stones <b>50 mm (2")</b> 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 <b>50 mm (2")</b> or larger in the following years where there is a demonstrable need.</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>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>For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than <b>2 inches</b> 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><b>VIII – Drainage / Tile Drains</b></p>	<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</p>	<p><b>10. Drainage Tiling</b></p> <p>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><b>10. Drainage Tiling</b></p> <p>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. <b>The Company will consider reasonable requests by the Landowner to construct additional tile runs near damaged lands.</b> 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</p>	<p><b>10. Drainage Tiling</b></p> <p>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</p>

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	<p>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 company will install tile along the pipeline in the following situations:</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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</li> </ol>	<p>The Company will retain the services of a qualified independent drainage Consultant. The Consultant will work with each Landowner prior <b>too</b>, 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.</p>	<p>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 <b>too</b>, 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. 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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>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 <b>to</b>, 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.</p>

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	<p>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 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</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 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</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 <b>and temporary land use limits</b> 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. 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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.</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</p>



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	<p>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 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>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>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</p>	<p>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. 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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</p>	<p>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>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</p>

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		<p>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>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</p>	<p>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>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</p>	<p>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>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</p>

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	The company will provide the landowner with a copy of as-built drainage plans.	<p>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>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>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>
	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><b>14. Tree Replacement</b></p> <p>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> <ul style="list-style-type: none"> <li>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.</li> <li>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</li> </ul>	<p><b>14. Tree Replacement</b></p> <p>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> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<p><b>14. Tree Replacement</b></p> <p>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> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>

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		<p>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>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>The Company will warrant such trees for a period of <b>three years</b> following planting, provided the Landowner waters the trees as appropriate after planting.</p>
<p><b>V.16(c) – Equipment Travel</b></p> <p><b>V.16(b) – Trench opening</b></p> <p><b>V.16(m) Replacement of Fences</b></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.(f) The Company will not open more than 6.0 km. of trench line at a time.</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 <b>destroyed</b> during pipeline construction.</p>	<p><b>15. <u>Covenants</u></b></p> <p>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</p>	<p><b>15. <u>Covenants</u></b></p> <p>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</p>	<p><b>15. <u>Covenants</u></b></p> <p>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><b>ADD: The Company will not open more than 6.0 km. of trench line at a time.</b></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</p>

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<b>V.16(j) – Culverts</b>	<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>construction will be reset.</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>construction will be reset.</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>construction will be reset.</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>
<b>V.16(k) Monitoring of Private Driveways</b>	<p>The Company agrees to monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>	<p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>	<p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>	<p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>
<b>V.16(l) No off-easement activities without permission</b>	<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>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>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>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>ADD:</p> <p><b>Criminal Background Checks</b> The Company will provide proof that all contractors working on the property have passed a criminal background check. This procedure will apply to Company employees and Company contractors/agents.</p> <p><b>Criminal Vulnerable Sector (VS) background checks</b> For all properties where minors may be present during the construction phase, Union Gas will provide proof that all</p>

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				<p>employees, contractors and agents have passed a Criminal Vulnerable Sector (VS) background check.</p> <p><b>Site specific fixed (non mobile) emergency station</b> The emergency station will have a copy of the Ministry of Labour “Notice of Project” posted. The contact information for the supervisor responsible for the work specific to the municipal address will be posted and that person shall be on site during the duration all of the work being conducted on the municipal address. The Supervisor will be provided the contact information for any residences on or near the property in the event that an incident occurs that requires immediate notification to property owners A sign in sheet will be posted at the emergency station. All staff entering and exiting the property will be required to sign in and sign out each time they enter or exit the property. This will assist with accountability for any issues or incidents that arise. In addition it will ensure all staff are accounted for in the event of an emergency evacuation. A map clearly indicating multiple emergency mustering stations will be posted at the emergency station. A speed limit of 10km/h shall apply to all vehicles working on or travelling across the property</p> <p><b>Securing of Work Site</b> The Company will secure the work site on each property as necessary to prevent unauthorized access to the work site and/or to maintain safety. At the request of the Landowner, the Company will fence off the work site.</p>



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II.9(d) – Landowner Complaint Tracking System	1.(x) The Company’s Landowner Complaint Tracking system shall be available to landowners for the proposed construction.	xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.	xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.	xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed construction.
I.4 – Agreement provided to Contractors	1.(cc) The Company will provide a copy of this Letter of Understanding and the environmental reports to the construction contractor.	xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.	xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.	xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.
V.16(d) – Suitable passage for agricultural equipment during construction	1.(ee) The Company will ensure suitable passage and land access for agricultural equipment during construction.	xiii) To ensure suitable passage and land access for agricultural equipment during construction.	xiii) To ensure suitable passage and land access for agricultural equipment during construction.	xiii) To ensure suitable passage and land access for agricultural equipment during construction.
III.10(e) – Topsoil Replacement	<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 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>(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.</p> <p>Alternatively, at the option of the landowner,</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>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>xiv) 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.</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>(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</p>

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IX – Post Construction Soil Testing	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.			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.
		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.	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.	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.
	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.	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.	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.	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.
	6.1 The Company will work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be	xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be	xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or	xvii) To work with the Landowner to ensure that weeds are controlled along the pipeline. Weeds will be sprayed or cut after



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	<p>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>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>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>discussion with the Landowner. The Landowner will be provided with a contact name in the event that concerns are experienced with weeds.</p> <p>ADD:</p> <p>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.</p>
	<p><b>6.2 DAMAGES FROM PIPELINE OPERATIONS</b></p> <p>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.</p> <p>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>xviii) To implement the Company's Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.</p>	<p>xviii) To implement the Company's Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.</p>	<p>xviii) To implement the Union Gas Limited - GAPLO Integrity Dig Agreement for all integrity and maintenance operations including pipe investigation, repair and replacement, drainage remediation work and depth of cover remediation work.</p>

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<p>VI.19 – Depth of Cover survey</p>	<p><b>6.4 DEPTH OF COVER</b> 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>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>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 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>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 1.2 metres the Company shall restore depth of cover to a minimum of 1.2 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 0.9 metres of cover over the pipeline.</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>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>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>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>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p>	<p>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p>	<p>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p>
<p><b>II.9(b)(ii)</b> In addition to the contact available by landowner to the LHPWSS’s project manager or designated agent, there shall be established a “Pipeline Impact Consultation Committee” (hereinafter referred to as the “Joint Committee”) consisting of LHPLA and LHPWSS representative(s) as agreed from time to time between the parties to provide a forum for communication and liaison between LHPWSS and LHPLA members with respect to any issues which may arise before,</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>ADD: The Company agrees to implement one joint committee for the project under the terms of reference agreed to in Schedule ____ hereof.</p>

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during and following construction. The Joint Committee shall hold regular meetings, at least monthly, or more frequently as they may determine.				
	<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>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><b>Landowner covenants as follows:</b></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>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><b>Landowner covenants as follows:</b></p> <p>i) To execute a Release Agreement 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>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.</p>	<p><b>Landowner covenants as follows:</b></p> <p>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.</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>
<b>II.9(b)(v) – Dispute Resolution – Expert Consultants</b>	<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</p>	<p><b>16. Dispute Resolution</b></p> <p>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</p>	<p><b>16. Dispute Resolution</b></p> <p>In the event the parties are unable to reach resolution with respect to the following matters, the Company shall pay the costs of independent</p>	<p><b>16. Dispute Resolution</b></p> <p>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</p>

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<p><b>II.9(c)(ii) – Dispute Resolution</b></p> <p><b>Schedule “F” – Dispute Resolution Process</b></p>	<p>on a binding basis concerning the following:</p> <p>(i) The need for topsoil importation as in Clause 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, 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>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>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>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>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>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 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. _____ and Schedule _____ hereof, the Company may retain a 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><b>VII – Woodlot and Hedge Rows / Other Property Specific Matter</b></p>	<p><b>5.2 (b) WOODLOTS AND HEDGEROW TREES</b></p>	<p><b>22. <u>Woodlots and Windbreak/Hedgerow Trees</u></b></p>	<p><b>22. <u>Woodlots and Windbreak/Hedgerow Trees</u></b></p>	<p><b>22. <u>Woodlots and Windbreak/ Hedgerow Trees</u></b></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</p>

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	<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.</p> <p>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:</p> <p>Option 1: The land will be completely cleared for construction with all stumps and brush removed so that the land can be cultivated.</p> <p>Option 2: At Union's expense, all vegetation</p>	<p>With respect to compensation for damage to woodlots, the Landowner will have the following two options:</p> <p><b>Option 1:</b> 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><b>Option 2:</b> 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> <p>The Company reserves the right to use trees for which it has paid compensation.</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 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</p>	<p><b>Landowner identifying the trees that will be affected.</b></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 <b>and satisfactory to the Landowner, acting reasonably.</b> 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> <p>The Company reserves the right to use trees for which it has paid compensation.</p>

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	<p>on the construction area will be cut with brush cutters or sprayed regularly so that brush or trees will not grow again.</p> <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>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>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>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>
<b>XII.45(c) – Gored Lands</b>	<p><b>7. GORED LAND</b></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><b>23. Gored Land</b></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. <b>Gored Land</b></p> <p>The Company agrees to pay the Landowner 100 % crop loss on the gored land, where reasonably practical. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project.</p>	<p>23. <b>Gored Land</b></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>At the Landowner's request, the Company will plant a cover crop on gored land.</p>
<p><b>II.9(b)(i) – Independent Construction Monitor</b></p> <p><b>Schedule “C” – Construction Monitor Scope of Work</b></p>	<p><b>9. INDEPENDENT CONSTRUCTION MONITOR</b></p> <p>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</p>	<p><i><b>GAPLO and Union Gas reached an agreement on the appointment of an Independent Construction Monitor prior to the hearing concerning the Hamilton-Milton Pipeline:</b></i></p> <p>Union agrees to the appointment of an</p>		<p><b>INDEPENDENT CONSTRUCTION MONITOR</b></p> <p>An independent construction monitor shall be appointed by CAEPLA-PLC, the Company and Ontario Energy Board Staff. The monitor shall be on site continuously</p>



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	<p>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>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:</p> <ol style="list-style-type: none"><li>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;</li><li>2. To review construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (“LOU”) agreed to between landowners and Union;</li><li>3. To review all specific construction commitments included in Union’s construction contract;</li><li>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</li><li>5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.</li></ol> <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>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>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 inspection access (subject to safety requirements) to all construction activities.</p>
	<p><b>2      LIABILITY</b></p> <p>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</p>	<p><b>24.    Liability</b></p> <p>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,</p>	<p>26.      <b>Liability</b></p> <p>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,</p>	<p>26.      <b>Liability</b></p> <p>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</p>

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	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.	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.	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.	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.
			30. <u>Integrity Dig Agreement</u>  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.	30. <u>Integrity Dig Agreement</u>  The Union Gas Limited – GAPLO Integrity Dig Agreement will be utilized for all integrity and maintenance operations including pipe investigation, repair and replacement, drainage remediation work and depth of cover remediation work pertaining to this pipeline and the existing paralleling NPS20 pipeline from Dawn to Dover Station.
	<b>SCHEDULE 1</b> <b>Landowner Relations and Terms of Reference of Joint Committee</b>  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			<b>SCHEDULE ____</b> <b>Landowner Relations and Terms of Reference of Joint Committee</b>  Committee Make-Up i) Members shall be affected landowners, and appropriate representatives of the Company. The Joint Committee shall be composed of two PLC landowners and three representatives of the Company.  In addition to Wet Soils Shutdown issues, the Joint Committee’s purpose is, with respect to PLC member properties, to:



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	<p>included in a Post Construction Report. The objective of the Joint Committee is to provide:</p> <p>i) a vehicle to address issues/concerns which arise during and following construction;</p> <p>ii) deal with any unforeseen circumstances which may arise during or following construction; and,</p> <p>iii) an opportunity for landowners to comment on how Union might improve future construction practices.</p> <p>In reviewing the foregoing, the types of issues which may be addressed are as follows:</p> <p>i) landowner concerns that arise during and following construction;</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 in the view of the landowners 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.</p> <p>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.</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</p>			<p>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;</p> <p>ii) provide a brief overview of issues/concerns raised during and following construction; and,</p> <p>iii) consider which items should be included in a Post Construction Report. The objective of the Joint Committee is to provide:</p> <p>i) provide a vehicle to address issues/concerns which arise during and following construction;</p> <p>ii) deal with any unforeseen circumstances which may arise during or following construction; and,</p> <p>iii) provide an opportunity for landowners to comment on how Union might improve future construction practices.</p> <p>In reviewing the foregoing, the types of issues which may be addressed are as follows:</p> <p>i) landowner concerns that arise during and following construction;</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 in the view of the landowners 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</p>

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	<p>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.</p>			<p>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.</p> <p>Payment to Landowner members i) The Company will pay to the landowner members of the Joint Committee at his or her direction a total payment of \$ 15,000 plus G.S.T. as an honorarium for their participation on the committee.</p>
IV. Wet Soil Protocol	<p><b>SCHEDULE 5</b> <b>Wet Soils Shutdown</b> 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</p>	<p><b>SCHEDULE 6</b> <b>Wet Soils Shutdown</b> <i>The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.</i></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. 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</p>	<p><b>SCHEDULE 6</b> <b>Wet Soils Shutdown</b> 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. 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</p>	<p><b>SCHEDULE 5</b> <b>Wet Soils Shutdown</b> 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 effect 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</p>

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	<p>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>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</p>	<p>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.</p> <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 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.</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</p>	<p>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.</p> <p>Wet soils shutdown is a routine part of Union's normal management process for pipeline construction activities. 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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</p>	<p>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 effects on the soils.</p> <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</p>

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	<p>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 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>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.</p>	<p>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. In this event, additional damages will be paid as a result based upon 50% of the disturbance payment.</p>	<p>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.</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 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>

**THIS AGREEMENT MADE IN DUPLICATE THIS            DAY OF            2012**

**BETWEEN:**

**LAKE HURON PIPELINE LANDOWNERS ASSOCIATION ("LHPLA")**

**- and -**

**LAKE HURON PRIMARY WATER SUPPLY SYSTEM ("LHPWSS")**

**LETTER OF UNDERTAKING**

**WHEREAS** LHPWSS is the successor to the Ontario Clean Water Agency ("OCWA") with respect to the ownership and operation of the Lake Huron Water Supply System, including the Lake Huron Pipeline;

**AND WHEREAS** LHPWSS proposes to twin certain sections of the Lake Huron Water Supply System within the existing easement in accordance with current state-of-the-art water pipeline industry practices, procedures, undertakings and commitments;

**AND WHEREAS** LHPLA is a voluntary association representing the interests of those Lake Huron Pipeline landowners who are concerned about potential impacts of the proposed construction upon their lands and who require assurance that the new pipeline will be constructed in a manner which minimizes damage to their lands and the environment, both in the short and the long terms;

**AND WHEREAS** in connection with a previous construction of other sections of the Lake Huron Pipeline referred to herein as the "1996 Twinning", the Minister of Environment and Energy authorized the 1996 Twinning to proceed on the basis of commitments by OCWA to undertake with LHPLA a cooperative investigation of easement conditions prior to construction for the purpose of developing and implementing appropriate mitigation measures to minimize agricultural impacts and to fund LHPLA's reasonable costs for this purpose;

**AND WHEREAS** in connection with the 1996 Twinning, LHPLA and OCWA entered into a Memorandum of Understanding dated March 8, 1996 providing for such cooperative investigation, development of individual farm mitigation and rehabilitation plans, and the negotiation of a Letter of Undertaking eventually concluded on April 3, 1996 resolving construction, rehabilitation, compensation and cost issues (the "1996 MOU" and "1996 LOU", respectively);

**AND WHEREAS** Section A.7 of the 1996 LOU sets out the agreement of the parties "to negotiate in good faith an agreement dealing with the issues that are set out herein if future

construction is contemplated for additional or replacement pipeline. The present negotiations would be part of the planning of such future works”;

**AND WHEREAS** the parties have agreed to undertake in connection with the current proposed construction, hereinafter referred to as the “2011 Twinning”, a similar cooperative investigation of easement conditions and development of individual farm mitigation and rehabilitation plans pursuant to a Memorandum of Understanding dated the 17<sup>th</sup> day of November 2010 and signed March 8, 2011 on behalf of the LHPWSS and signed March 12, 2011 on behalf of LHPLA (hereinafter the “2011 MOU”) and to conclude this Letter of Undertaking (hereinafter “this Agreement” or the “2011 LOU”) to set out the resolutions agreed upon with respect to the construction, rehabilitation, compensation and cost issues affecting those properties which are subject to the 2011 Twinning;

**AND WHEREAS** LHPLA has obtained the authority of a number of the landowners as listed in Schedule "A" affected by the 2011 Twinning to enter into this Agreement as their representative agent;

**AND WHEREAS** in accordance with the 2011 MOU terms the LHPLA consultants have produced reports entitled “Preliminary Farm Planning Report: On-Farm Soil Investigations for Landowners Involved in the 2011 Lake Huron Pipeline Twinning Construction” dated April 6, 2011 and submitted by The Soil Resource Group” and “An Assessment of Landowner Issues and Concerns Associated With the Proposed 2011 Lake Huron Water Pipeline Twinning Project” dated April 4, 2011 and submitted by George L. Brinkman, Intercambio Ltd. (hereinafter collectively referred to as the “Consultants’ Reports” and individual farm plan reviews for each affected LHPLA landowner (hereinafter referred to as the “2011 Farm Plan(s)”);

**AND WHEREAS** upon completion of this Agreement individual landowners compensation agreements proposed by LHPWSS in the form of Schedule B to this Agreement will be distributed to LHPLA members;

**AND WHEREAS** the parties now enter into this Agreement to document the resolutions agreed upon with respect to the construction, rehabilitation, compensation and cost issues affecting those properties which are subject to the 2011 Twinning.

**NOW, THEREFORE**, in consideration of their mutual covenants, the parties agree as follows:

## **I. GENERAL**

1. In carrying out the proposed construction, LHPWSS shall abide by the undertakings and recommendations contained in the *Lake Huron Primary Water Transmission Main Twinning Municipal Class Environmental Assessment Project File March 2011*, the specifications and any supplementary specifications issued with respect to the proposed construction as modified by this agreement and the Lake Huron Pipeline 2011 Twinning Agreement for Compensation with each landowner in the form attached as Schedule "B" to this Agreement.

2. In the event of a conflict between the undertakings and recommendations contained in the *Lake Huron Primary Water Transmission Main Twinning Municipal Class Environmental Assessment Project File March 2011* and the terms of this Agreement, then this Agreement, including Schedule "B", shall prevail. Notwithstanding the foregoing provisions of this paragraph if a conflict exists within or between the *Lake Huron Primary Water Transmission Main Twinning Municipal Class Environmental Assessment Project File March 2011* and the terms of this Agreement and any applicable laws the more stringent or higher quality requirements shall be the obligation of the parties.
3. In the event of a conflict between this Agreement and Schedule "B", including the individual Farm Plans, this Agreement shall prevail.
4. Subject to any alternate agreement with affected landowners, the provisions of this Agreement shall apply and a copy of this Agreement shall be provided to all contractors awarded work in connection with the proposed construction and shall be communicated to all contractors engaged to carry out such work.
5. The undertakings contained herein shall be binding upon LHPWSS, its successors and assigns, and shall enure to the benefit of the heirs, executors, administrators, successors and assigns of present landowners.
6. LHPWSS shall compensate landowners for all damages suffered as a result of its construction of the 2011 Twinning in accordance with the terms of this Agreement.
7. The parties hereby undertake to negotiate in good faith an agreement dealing with the issues that are set out herein if future construction is contemplated for additional or replacement pipelines. These negotiations would be part of the planning of such future works.
8. In the case of a rupture of the pipeline forming part of the 2011 Twinning, during the 2011 Twinning construction where on- or off-easement soils are washed away or otherwise damaged, LHPWSS shall be responsible for restoring the subsoils and topsoil in a manner consistent with this Agreement with necessary modifications to reflect the circumstances surrounding the rupture, importing Horizon C and Horizon B soils and topsoil as necessary to re-establish, as close as practicable, the soil profile existing prior to the rupture and thereby return the soil to a productive state, and the specific compensation provisions of Schedule B which apply to such circumstances shall apply to the affected lands. For this purpose, LHPWSS will retain an independent qualified consultant satisfactory to LHPLA, acting reasonably, to assess and prescribe remediation for affected soils. The amount of compensation paid for crop loss under this paragraph 8 of this Agreement on easement lands will be adjusted to ensure payments are not duplicated for future losses already paid or to be paid for under the 2011 Twinning.

## II. COMMUNICATION/LANDOWNER RELATIONS

9. Prior to the construction of the 2011 Twinning, LHPWSS shall develop and implement a landowner communication and liaison program as follows:

(a) Design Stage (Pre-construction)

- (i) LHPWSS's project manager or designated agent and a representative of LHPLA shall visit with each affected landowner to discuss site specific issues and implementation of mitigation and rehabilitation measures in accordance with the provisions of this Agreement and the individual farm plan reviews;
- (ii) LHPWSS shall identify to LHPLA and each landowner the name and position of the individual responsible for ensuring that the undertakings provided herein are satisfied. Contact names and a clear written description of LHPWSS's complaint resolution procedure shall be provided to landowners prior to commencement of work. In the event of the replacement of any such individual, LHPWSS will notify LHPLA and each landowner of the replacement and identity of the new designated individual within five working days;
- (iii) Before and during construction a landowner's initial contact for the resolution of concerns and complaints will be LHPWSS's project manager or designated agent.

(b) During Construction

- (i) An independent construction monitor for each construction contract spread shall be appointed by LHPLA subject to LHPWSS's approval, acting reasonably. LHPWSS shall pay the reasonable fees of the construction monitor (consistent with industry standards) and the expenses of the construction monitor. The construction monitor shall be on site as required to carry out its duties in accordance with the scope of work terms agreed upon by LHPLA and LHPWSS (a copy of which is attached as Schedule "C" to this Agreement) for the task of monitoring construction with respect to all issues of concern to landowners, and shall be available to landowners, the Joint Committee and LHPWSS at all times. LHPWSS 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 inspection access (subject to safety requirements) to all LHPWSS's construction activities;
- (ii) In addition to the contact available by landowner to the LHPWSS's project manager or designated agent, there shall be established a "Pipeline Impact Consultation Committee" (hereinafter referred to as the "Joint



Committee”) consisting of LHPLA and LHPWSS representative(s) as agreed from time to time between the parties to provide a forum for communication and liaison between LHPWSS and LHPLA members with respect to any issues which may arise before, during and following construction. The Joint Committee shall hold regular meetings, at least monthly, or more frequently as they may determine.

- (iii) In addition there shall be regular Site Meetings, to which the Contractors, Engineers, Soils consultants, Surveyors, representatives of LHPWSS, the independent construction monitor and a representative of LHPLA are invited to review an outline of the work scheduled to occur over the course of the following week, with the purpose to address issues and identify solutions. The agenda for such Site meetings will be created to include standard agenda items, such as complaints, or issues which have arisen in the previous week for the purpose of addressing any issues which have not be satisfactorily dealt with on site. Any matter remaining in dispute between the parties from a Site Meeting may be referred to the Joint Committee, and failing resolution at the Joint Committee, may be referred to dispute resolution in accordance with paragraph 51 of this Agreement;
- (iv) LHPWSS’s project manager or designated agent will review the feasibility of implementing corrective or remedial measures suggested by the construction monitor. The construction monitor will bring issues to the attention of LHPWSS’s project manager or designated agent in a timely manner for resolution in the field and will bring systemic issues or concerns, or matters which the project manager or designated agent and the construction monitor cannot agree upon to the Joint Committee for consideration, and failing resolution at the Joint Committee, such matter may be referred to dispute resolution in accordance with paragraph 51 of this Agreement. The monitor shall deliver interim and final reports to both LHPLA and LHPWSS with respect to identified issues and their resolution;
- (v) Subject to the prior approval of LHPWSS and LHPLA, expert consultants as may be agreed between the parties may be retained to advise LHPLA and to work with LHPWSS's consultants and contractors to resolve matters which may arise from time to time. LHPWSS will be responsible for the costs of independent consultants satisfactory to LHPLA to resolve site specific disputes concerning the need for topsoil importation to address subsidence (paragraph 17), deficient cover (paragraph 19), excessive crop loss (paragraph 10(e)), compensation for specialty crops (paragraph 47), or future “top-up” crop loss compensation (paragraph 45(a)).

## (c) Post Construction

- (i) A landowner's contact for the resolution of concerns and complaints will be a designated representative of LHPWSS.
- (ii) Any matter in dispute between the parties may be referred to dispute resolution in accordance with paragraph 51 of this Agreement.

## (d) General

- (i) LHPWSS shall design and implement a landowner complaint tracking system identifying date and time of complaint; identity of owner; nature of the complaint; actions taken in response; and reasons underlying such actions. A copy of the complaint record is to be provided to both LHPLA and the complaining landowner.

**III. SOIL PRESERVATION**

10. In connection with the construction of the pipeline, LHPWSS will consult with each individual owner or his agents with respect to implementation of the following soil preservation policies, practices and procedures:

## (a) Topsoil Stripping:

- (i) Prior to construction, LHPWSS in consultation with LHPLA's consultants shall carry out further soil testing on each property to determine the location on easement of mixed and relatively unmixed ("virgin") topsoil, and prior to the removal of Horizon C from the trench, the compaction of the native soils on and off easement;
- (ii) where no existing crown problem is identified, topsoil stripping will be limited to not more than the easement width. B and C subsoil horizons from the trench, mixed topsoil, and identified "virgin" topsoil shall be stripped and piled separately with one metre separation between piles, free from disturbance from construction operations, as set out in Standard Drawing 1 in Schedule "D" to this Agreement;
- (iii) where an existing crown problem is identified and a temporary easement is not determined by LHPWSS to be required after consultation with LHPLA's consultants, B and C subsoil horizons from the trench, mixed topsoil, and identified "virgin" topsoil shall be stripped and piled separately with one metre separation between piles, free from disturbance from construction operations, as set out in Standard Drawing 1 in Schedule "D" to this Agreement;
- (iv) where an existing crown problem is identified and a temporary easement is determined by LHPWSS to be required after consultation with

LHPLA's consultants, "virgin" topsoil is to be stockpiled off easement as set out in Standard Drawing 2 in Schedule "D" to this Agreement on temporary easement lands in accordance with the temporary easement agreement to be entered into between LHPWSS and the landowner in the form set out in Schedule "E" and the landowner shall receive compensation for the use of the temporary easement in accordance with Paragraph 45(d), hereof. At the request of the landowner, a mulch layer will be provided between the existing topsoil and the stripped topsoil in situations where a crop is not present;

- (v) stripping is to be conducted by use of a bulldozer and a grader, with depth of stripping to be based upon visual identification of soil strata on a "colour-change" basis. If requested by the landowner, topsoil will be ploughed before being stripped to a depth as specified by the landowner;
- (vi) at the request and pursuant to the direction of the landowner, topsoil may be stripped in wetlands and woodlands. All soil storage in these areas will be carried out on the existing easement in accordance with the Standard Drawing 1 in Schedule "D" to this Agreement.

(b) Existing Crown From Original Construction:

Where an existing crown problem is identified:

- (i) LHPWSS in consultation with LHPLA's consultants will undertake soil profiling to identify mixed and virgin topsoil in and adjacent to the crown;
- (ii) topsoil stripping will take place across the permanent easement and "virgin" topsoil, mixed topsoil and subsoils stripped and stored separately in accordance with the requirements of Paragraph 10(a) above,
- (iii) a sufficient volume of trench subsoils will be removed to eliminate the crown and, following crown removal, the mixed topsoil will be restored over the trench consistent with the surrounding grade in accordance with Paragraph 10(c) following.
- (iv) Any subsequent subsidence or erosion which is a result of the 2011 Twinning will be remedied in accordance with and subject to the provisions of paragraph 17 of this Agreement.

(c) Topsoil Restoration:

- (i) LHPWSS will undertake appropriate survey techniques to establish pre- and post-construction grade with the view to restoring soils as close to pre-construction grade as reasonably practicable;
- (ii) subsoils are to be returned to the trench in a manner consistent with the existing soil horizons;

- (iii) Horizon C will be compacted to 95% Standard Proctor Density from the top of the pipe bedding granular material to within 1.0 metre (approximately 3 feet) of finished grade of topsoil. The balance of the Horizon C soils are to be compacted to existing compaction levels of the native soils, as determined in Subclause 10(a)(i) above;
- (iv) all spoil from bore and road excavations will be removed in accordance with applicable Ministry of the Environment Guidelines so as not to contaminate the topsoil and the topsoil will be stripped in the affected area so that no mixing will occur;
- (v) after subsoils are returned to the trench without crowning, the landowner shall be entitled to any excess material and, following consultation with the landowner with respect to the means of and the route of transportation of this material, LHPWSS shall move the material to a location of the landowner's choice, prepared by the landowner for its receipt, within a reasonable distance from the worksite provided that the landowner accepts responsibility for such delivery;
- (vi) following construction from concession road to concession road and repair of tile drains, before the replacement of the topsoil and as soil conditions permit, LHPWSS shall subsoil and chisel plough exposed subsoils and remove all stones greater than 50 mm (2 inches) in diameter in a manner that does not remove topsoil or excessively recompact the subsoils;
- (vii) LHPWSS shall conduct testing to ensure that compaction problems have been resolved and shall restore subsoils to their original contour prior to restoration of topsoil;
- (viii) topsoil may be restored in the year of construction without crowning. Alternatively, at the option of the landowner, topsoil may be overwintered and replaced the following year again with lands returned to the surrounding grade. If there is mounding over the trench in the year following topsoil replacement, LHPWSS will strip topsoil, remove excess subsoil and replace topsoil or, at the option of the landowner if adequate soil depth is available, the mound may be levelled;
- (ix) if it is necessary to over-winter topsoil, piled topsoil shall be sprayed with a mulch material with appropriate cover crop seed to protect the topsoil over the winter. Prior to the restoration of topsoil, LHPWSS shall remedy any subsidence and shall again subsoil and chisel plough exposed subsoils with stone-picking of stones greater than 50 mm in diameter in a manner that does not remove topsoil or excessively recompact the subsoils;
- (x) following restoration of topsoil, LHPWSS shall paraplough where indicated by testing, straight-tooth chisel plough (to minimize topsoil and

subsoil mixing), and pick stones greater than 50 mm in diameter in a manner that does not remove topsoil or excessively recompact the soils;

- (xi) LHPWSS shall, at a time satisfactory to the landowner, pick stones greater than 50 mm in diameter in each of the first two years following construction and shall return to pick stones greater than 50 mm in the following years where there is a demonstrable need indicated by significantly greater stones surfacing on easement as compared to off easement lands;
- (xii) where topsoil is required to repair subsidence, tile repairs are necessary following replacement of topsoil, or some other repair requires heavy equipment to move over the easement following topsoil replacement and where indicated by testing, following consultation with the landowner, LHPWSS will arrange for an additional cultivation or chisel ploughing to the depth of the compaction and stone-picking of stones greater than 50 mm in diameter in a manner that does not remove topsoil or excessively recompact the soils

(d) Cover Crops:

- (i) LHPWSS undertakes to use its best efforts to complete any 2011 Twinning pipeline construction (save and except where necessitated by an emergency) in accordance with the following:
  - (A) pipeline construction within the easement, including soil rehabilitation - September 30,
  - (B) connection to existing 1200 mm diameter pipeline - October 31,
  - (C) completion of interconnecting valve chamber construction and hydrostatic testing - December 15
- (ii) LHPWSS shall establish a cover crop on the easement in the year of topsoil replacement and, at the option of the landowner, for two years thereafter. The type of cover crop established shall reflect the wishes of the landowner. In any year where a cover crop is planted, LHPWSS shall pay to the landowner the crop loss amount in accordance with paragraph 45(a) hereof plus a "top-up" compensation of an amount which will provide total compensation to the landowner of 100% for crop loss in that year, as provided therein.

(e) Topsoil Replacement

- (i) LHPWSS will import 75mm of topsoil to remedy any areas within the easement affected by construction that have crop losses in excess of 50% in the fifth year following construction (the "affected area") regardless of the cause of the loss and without prejudice to the landowner's continuing

right to compensation for losses in excess of those already compensated. In order to establish crop loss in excess of 50% the landowner shall, at his/her expense, have the monitoring program carried out on his/her property by the agronomist chosen pursuant to paragraph 45(a)(iv) in the fifth year following construction and if the results of this monitoring program show an on-easement crop loss in excess of 50% then LHPWSS will reimburse the landowner the cost of the monitoring plus a "top-up" compensation of an amount which will provide full compensation to the landowner of his/her crop loss for year five, and to the extent that the monitored year 5 loss exceeds the loss compensated under paragraph 45(a) for post-construction years 2, 3 and/or 4 LHPWSS will provide a "top-up" compensation in any or all of those years, as well as proceed with the import of topsoil. The "top-up" compensation to be provided pursuant to this paragraph of the Agreement is illustrated by way of the following example: If the on-easement crop loss as monitored for year 5 is demonstrated to be 80% then LHPWSS will compensate the landowner under paragraph 45(a) for 30% crop loss and provide an additional "top-up" compensation of 50% crop loss for year 5, and an additional "top-up" compensation of 40% crop loss for year 4 and an additional "top-up" compensation of 30% crop loss for year 3 in order to provide full compensation to the landowner;

- (ii) Where ruts exist on the affected area, then prior to spreading of the topsoil, LHPWSS will regrade the total width of the easement in the location of the affected area to level any ruts;
- (iii) The quantity of topsoil to be spread is to be equivalent to 75mm (three inches) times the total area of affected land. The topsoil must be of a quality described in paragraph 17, dry and tested to ensure the absence of soybean cyst nematode;
- (iv) The imported topsoil is to be spread uniformly over the affected area or as otherwise agreed by the landowner in a manner so as not to adversely affect the natural drainage of the land or adversely impact farm operations.

#### **IV. WET SOIL PROTOCOL**

11. Soils are considered to be excessively wet when the planned activity could cause damage to soils either due to rutting by traffic through the topsoil layer into the subsoil; soil structure damage during soil handling; or compaction and associated pulverization of topsoil structure due to heavy traffic. Except in the case of an emergency posing imminent risks to human or animal life or property, during construction through agricultural lands, activities will be suspended in wet soil conditions upon consideration of all of the following factors:

- (a) plasticity of the surface soil to depth of approximately 10-20 centimetres;

- (b) location and depth of the wetting front in relation to the A and B horizons;
  - (c) extent of surface ponding;
  - (d) extent and depth of rutting;
  - (e) aerial extent and location of potential rutting and compaction (i.e., can traffic be re-routed around wet area;
  - (f) type of equipment and nature of the construction operations proposed for that day;
  - (g) excessive wheel slip;
  - (h) excessive build up of mud on tires or cleats;
  - (i) tracking of mud as vehicles leave the easement.
12. The decision to suspend activities in excessively wet soil conditions will be made by the Joint Committee with the assistance of the construction monitor as required. While constructing the pipeline, LHPWSS's project manager or designated agent shall inspect the right-of-way conditions each day before construction activities commence for that day. If, in the judgment of LHPWSS's project manager or designated agent, or the Joint Committee with the assistance of the construction monitor, the easement conditions on agricultural lands are such that construction would have an adverse effect on the soils due to wet soil conditions, the contractor is prohibited from starting construction activities. Contractors shall immediately be notified of a wet soil shutdown and shall promptly cease all affected construction activity.
13. The wet soil shutdown restriction will remain in effect until, in the judgment of LHPWSS's project manager or designated agent and the Joint Committee with the assistance of the construction monitor, the soils have sufficiently dried to the extent that commencing construction activities would have no adverse effects on the soils. A partial wet weather shutdown may be declared if certain activities can continue in certain work areas without causing soil damage. In the event that construction activities are undertaken by LHPWSS in wet soil conditions as determined by the construction monitor, additional mitigation measures may be put in place to minimize resulting damages. This may include restricted movement on the right-of-way to wide tracked equipment, bored crossings, welding, avoiding certain areas, full easement stripping, geotextile roads, the use of swamp mats, the use of specialized equipment where deemed appropriate by LHPWSS, etc.
14. LHPWSS's project manager or designated agent 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. LHPWSS will authorize work in wet soils conditions only when all other reasonable alternatives have been exhausted. Where weather conditions are such that excessively wet/thawed soil conditions are likely to occur, contingency measures may, if warranted and practicable, be implemented prior to

the occurrence of the above indicators. If rain commences after construction has started, a wet soil shutdown may be imposed in accordance with paragraph 12.

15. Where construction activities are undertaken by LHPWSS in wet soil conditions as determined by the construction monitor, LHPWSS 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 does not affect the landowner's right to topsoil replacement where crop loss exceeds 50% in the fifth year following construction.

## V. CONSTRUCTION PRACTICES

16. LHPWSS shall implement proper and appropriate construction practices and mitigation and clean-up measures to minimize injury and damage to the land and future crops, including those contained in the individual farm plan reviews, and the following:
  - (a) LHPWSS will install the 2011 Twinning pipeline with at least 1.8 metres of cover. If LHPWSS, acting reasonably, determines in consultation with the landowner that it is necessary to increase the depth of the 2011 Twinning pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, LHPWSS will provide for additional depth of cover
  - (b) LHPWSS undertakes to make all reasonable efforts to minimize the length of the open trench and, in any event, at no time shall more than two hundred metres of trench be opened in any one site by LHPWSS or its agents. Where the trench is to be left open overnight, proper barriers shall be introduced to reduce risk of injury to the public;
  - (c) All heavy equipment shall travel only along the trench line within the easement. Such equipment shall enter from either end of the easement lands and LHPWSS shall make its best efforts to ensure that such equipment does not haul "loaded" beyond the centre point of the easement lands and with due regard to the existing pipeline. Use of all equipment shall comply with all applicable regulations;
  - (d) LHPWSS will ensure suitable passage and land access for agricultural equipment during construction. Where construction interferes with access to farm operations, LHPWSS shall maintain suitable access to permit the landowner to continue operations on non-easement portions of the land or shall compensate landowners in accordance with paragraph 45(d) hereof. Where requested by the landowner, LHPWSS will leave plugs for access across the trench to the remainder of the landowner's property during construction using appropriate construction methods to minimize the risk of damage to the lands, which may include the use of construction matting or other suitable material, as available. Following construction, LHPWSS shall ensure that the landowner shall have access across the former trench and the easement.



- (e) Easement boundaries, including any temporary easement where required for storage of topsoil, shall be identified by stakes located at no more than 15 metre intervals. The intervals or distance between stakes may decrease as deemed necessary in order to maintain the sight-lines and easement boundaries in areas of sight obstruction, rolling terrain or stream and road crossings. The stakes will not be removed during the topsoil stripping operation. LHPWSS and its agents shall be limited to working within these lands and these boundary stakes shall not be removed until the end of construction. LHPWSS will restake the easement limit for post construction work at the request of the landowner;
- (f) Any boulders and other debris removed in the course of construction shall be disposed of off the easement and away from the property of the landowner;
- (g) LHPWSS shall ensure that any stone imported during construction for the purpose of encasing pipe is contained and is not permitted to be scattered across the easement or the landowner's property. Any remnants of stone shall be removed immediately after construction;
- (h) LHPWSS shall be responsible for ensuring that any water accumulating on the easement during construction is released to an open drain or ditch but not into a tile drain (except with landowner consent) unless through the installation of a temporary tile. LHPWSS will provide to the landowner any temporary tiling plan for review. If LHPWSS pumps into an existing tile with the landowner's permission, the water will be filtered;
- (i) Where private water or utility lines are planned to be interrupted, LHPWSS will supply temporary service to the affected landowners prior to service interruption. In the case of accidental interruption, temporary services will be provided by LHPWSS at the earliest possible opportunity where services will not be restored within a reasonable period of time, all in accordance with standards applicable to municipal projects;
- (j) LHPWSS agrees that neither it nor its agents shall use any laneways or culverts on the landowners' property beyond the limits of the easement without the prior written consent of the landowner. LHPWSS shall, at its own expense, repair any damages to private accesses caused by 2011 Twinning activities or compensate the landowner accordingly;
- (k) LHPWSS and its agents shall monitor and maintain private driveways during construction that cross the easement, that are affected by construction activities as required, and for eighteen months after construction for damage which is a result of such construction activity;
- (l) LHPWSS and LHPLA agree that 2011 Twinning construction activities will not occur in off-easement areas without the written permission of both the landowner and LHPWSS. Written permission of the parties will be established in a temporary easement agreement in the form set out in Schedule "E" and the

landowner shall receive compensation for the use of the temporary easement in accordance with Paragraph 45(d) hereof. If damages are incurred as a result of off-easement 2011 Twinning construction activities authorized by LHPWSS and the landowner, then LHPWSS will compensate the landowner for all such damages. If damages are incurred as a result of any off-easement 2011 Twinning construction activities carried out with the permission of the landowner, but without the written permission of LHPWSS, as signified by a temporary easement agreement in the form set out in Schedule "E", then LHPWSS shall not be liable. If damages are incurred as a result of off-easement construction/operations which are within the scope of work of the 2011 Twinning, but not authorized by either LHPWSS or the landowner, then LHPWSS, subject to the terms herein, will compensate the landowner for such damages and seek recourse against the wrongdoer. The landowner shall use their best efforts to bring any unauthorized off-easement construction/operations to the attention of LHPWSS forthwith after becoming aware of the activity.

- (m) Upon completion of 2011 Twinning, LHPWSS agrees to repair all permanent fences using standard nine page fence, barbed wire, fence posts of 150mm (six inch) minimum, anchor posts of 200mm (eight inch) minimum and a proper gate, or equivalent to the existing fence where it may differ from the standard nine page fence. LHPWSS will also reset or replace any survey monuments which are removed or destroyed during the 2011 Twinning in accordance with applicable law.

## **VI EROSION**

17. Following restoration of topsoil, if subsidence or erosion occurs within two years following completion of 2011 Twinning, to a depth of greater than 50 mm, LHPWSS shall be responsible for importing topsoil to repair any such subsidence or erosion. The imported topsoil is to;
  - (a) be natural, cultivated, medium loam, neither heavy clay nor sandy in nature, capable of sustaining heavy agricultural growths,
  - (b) have a humus content of not less than 3% and not greater than 25%,
  - (c) be free from living vegetation, roots, stones, subsoil and other objects larger than 50 mm in size, and
  - (d) be from a source to be approved by LHPWSS or its agents after consultation with LHPLA.
18. If the construction of the 2011 Twinning of pipeline causes a restriction of the natural surface flow of water, due to too much or not enough subsidence, irrespective of the 50mm (two inch) criteria specified, LHPWSS will remove the restriction by the methods described in paragraphs 10(c)(viii) or 17 herein.

19. At the request of the landowner at any time following construction, LHPWSS shall undertake a depth of cover survey of the 2011 Twinning pipeline, and shall provide its findings to the landowner. Where it is determined that cover over the 2011 Twinning pipeline section is less than 1.8 metres, and that such reduced depth interferes with the cultivation of the landowner's lands or poses a safety concern, LHPWSS shall:
- (a) restore the depth of cover to 1.8 metres with the importation of topsoil; or
  - (b) otherwise implement mitigative measures so as to ensure the continuance of ordinary cultivation and safe crossing of the landowner's farming equipment over the 2011 Twinning pipeline section; or
  - (c) with respect to cultivated lands and with the landowner's agreement, pay compensation to the landowner for any resulting crop loss or other direct damages.

## **VII. WOODLOT AND HEDGE ROWS/OTHER PROPERTY SPECIFIC MATTER**

20. Where an easement divides an established woodlot at property or other fence lines along the 2011 Twinning pipeline section, LHPWSS shall establish a windbreak across easement. Windbreaks will consist of 2-metre cedars planted at 1.5 metre intervals, except immediately over the pipeline, across the full width of the easement, or another tree type, planted at suitable intervals, equivalent in total cost and hardiness that is acceptable to the landowner. LHPWSS shall guarantee these trees for a period of three (3) years after planting, provided the landowner waters the trees as appropriate after planting.
21. All stumps shall be removed or mulched. Where stumps are removed, LHPWSS or its agents shall ensure that as much soil as possible is removed from the stump prior to removal from the property. Mulching shall be by means of a mechanical chipper or grinder which shall ensure that the area which previously housed the stump is capable of being farmed.
22. Bulldozing of woodlots shall not be permitted under any circumstances. LHPWSS or its agents shall use a bush blade in order to minimize topsoil loss in connection with clearing of easement woodlots. Following the use of a bush blade, the immediate area shall be inspected for debris which may have been ejected during the course of the easement clearing process. LHPWSS shall use its best efforts to remove debris in order to protect farm equipment from damage resulting from debris.
23. All hedge rows removed from easement lands shall be replaced, except immediately over the pipeline, by either 2-metre cedars planted at 1.5 metre intervals or 2 metre white spruce planted at 3 metre intervals, across the full width of the easement, or another tree type, planted at suitable intervals, equivalent in total cost and hardiness, that is acceptable to the landowner. LHPWSS shall guarantee these trees for a period of three (3) years after planting, provided the landowner waters the trees as appropriate after planting.

## VIII. DRAINAGE/TILE DRAINS

24. All storm drains, municipal drains, farm drains and drain outlet pipes which are encountered during stripping or excavation operations, shall be staked and their locations recorded for subsequent repair or replacement after pipeline installation.
25. The exact locations of agricultural drainage systems are unknown. Drain tiles encountered or rendered ineffective during construction shall be restored by:
  - (a) replacing damaged tiles in the same location across the 2011 Twinning pipeline trench and easements; or
  - (b) installing header drains parallel to the 2011 Twinning pipeline trench within and adjacent to the pipeline easement boundary to intercept lateral tiles; or
  - (c) installing drains parallel to the 2011 Twinning pipeline trench between the new and existing pipelines.
26. The method of agricultural drainage system restoration for each property shall be approved by the property owner and LHPWSS.
27. Where a new header tile and/or substantial redesign is required of the systematic drainage in connection with the 2011 Twinning, the work shall be carried out by a local specialist contractor licensed to install drainage works under the Agricultural Tile Drainage Installation Act. LHPWSS will consult with LHPLA and mutually develop a list of acceptable tile drainage contractors to be used during construction. The selected local specialist contractor will work with landowners to develop plans and installation methods, and, if the plan is implemented, will certify that the construction accords with the plan.
28. Responsibilities of the local specialist contractor include:
  - (a) preparations of drainage design;
  - (b) submission of drainage design to the property owner for approval and signature;
  - (c) submission of this approved drainage design to LHPWSS for review and acceptance;
  - (d) installation of all drainage works including replacement of damaged tiles across the 2011 Twinning pipeline trench and tile otherwise rendered ineffective;
  - (e) arranging inspection of the drainage works by the property owner before backfilling. All inspections may be inspected by the landowner or his/her designate prior to backfilling where practicable. Local specialist contractor will provide the landowner or his/her designate advance notice of the tile repair schedule;

- (f) submission of As-Built Drawings to the property owner and LHPWSS within two weeks of completing drainage works on affected property; and
  - (g) obtaining a signed release from the property owner and submitting the release to LHPWSS.
29. If prior to construction LHPWSS is provided with plans prepared by the local specialist contractor and approved in writing by the landowner, LHPWSS will install tile along the 2011 Twinning pipeline in the following situations:
- (a) In areas of numerous random tiles or systematic tiles that cross the 2011 Twinning pipeline easement, LHPWSS, during construction, will provide temporary drainage tile connections across the 2011 Twinning pipeline trench to maintain existing flow and will install 2 header tiles (interceptor drains) at each easement margin and 2 drains between the new and existing pipelines as laid out in the plans. The downstream end of the cut tile will be plugged. Such work will occur after topsoil stripping and as soon as practicable after return of subsoils to the trench, and prior to topsoil restoration. Header tiles will be installed using a trench method to ensure that all field tiles are located and connected as required by the tile plan without mixing of topsoils and subsoils. Any intercepted drains will be connected and the downstream end plugged. LHPWSS will attempt to minimize the number of tiles crossing the 2011 Twinning pipeline easement;
  - (b) In areas where drainage problems will be created as a result of the 2011 Twinning, 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;
  - (c) Drainage laterals will be installed after construction of the 2011 Twinning pipeline to provide easement drainage. Lateral and cross-easement tiles will be installed in the construction year as weather permits;
  - (d) Other areas within the 2011 Twinning recommended by the drainage consultant.
30. All catch basin leads, storm drains, pipe culverts, erosion control devices, municipal drain tiles and farm drainage tiles outside the limits of the 2011 Twinning pipeline trench, whether on or off the pipeline easement, shall be protected during the 2011 Twinning.
31. Each end of any drainage tile encountered during excavation shall be staked.
32. The downstream end of tile shall be plugged or temporary piping shall be installed between ends to maintain existing flow.
33. All tile damaged or rendered ineffective by the construction, on or off easement, shall be repaired and/or replaced. In areas where topsoil has been stripped, and at the request of the landowner, LHPWSS will complete post-construction tile installation and repairs prior to topsoil replacement. LHPWSS will utilize the most current specifications

concerning tile support systems for existing tile across the trench. The method of support will be agreed between the landowner and LHPWSS in the approved drainage design.

34. LHPWSS will accommodate within the 2011 Twinning pipeline section any planned and future drainage systems and drainage design. LHPWSS 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 within the 2011 Twinning pipeline section but has not yet obtained professionally designed plans, LHPWSS will hire a drainage consultant to develop an easement crossing drainage plan in consultation with the landowner.
35. Upon any excavation to effect tile repair or replacement, or implementation of remedial measures, topsoil and subsoil shall be separated and piled one metre apart in accordance with the procedures prescribed in paragraph 10, as modified to suit the circumstances, after consultation with the landowner.
36. Where the integrity of tile drain is compromised by the construction, operation or repair of the pipeline in connection with the 2011 Twinning, LHPWSS shall repair, replace or institute remedial measures in respect of any existing tile or municipal drain adversely affected by such work, in consultation with the landowner. LHPWSS guarantees and will be responsible for the integrity and performance of such repairs as well as any other drain tile or municipal drain compromised by the 2011 Twinning. Where the landowner, acting reasonably, believes there may be a drainage problem arising from the 2011 Twinning, LHPWSS will perform an integrity check on any tile construction/repair crossing the pipeline and repair any deficiency to the landowner's satisfaction.

## **IX. POST CONSTRUCTION SOIL TESTING**

37. LHPWSS or its agents, in conjunction with LHPLA consultants, shall conduct further testing of existing easement conditions to determine the extent of mixing and compaction prior to construction.
38. In addition, in consultation with the landowner, LHPWSS shall sample soils on all agricultural easements 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 LHPLA and the landowner. In the event the report indicates the presence of SCN on an agricultural easement, 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. LHPWSS will also test for SCN when conducting post-construction soil tests. LHPWSS does not assume any responsibility for pre-existing soil issues and shall only be responsible under the terms of this Agreement to the extent that the soil issue is a result of the 2011 Twinning.
39. LHPWSS or its agents shall carry out post-construction sampling of on and off easement soils with the results to be made available to LHPLA and individual landowners.

40. Off easement soil samples shall be obtained at least 50 metres off easement but in a location which shall be comparable to the easement lands with regard to soil fertility.
41. Soil testing shall include comparative compaction testing of the subsoils, an analysis of carbonate content and organic matter. NPK (nitrogen, phosphorous, 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 report of soil test results shall identify deficiencies in on easement soils and recommend remediation measures including all commercially reasonable alternatives. LHPWSS shall review this information, and after consideration of the alternatives, shall select a remediation method from the alternatives provided, and upon obtaining the consent of the landowner will undertake remediation of the soil.

## **X. WELL-WATER TESTING**

42. To ensure that the quality and quantity (i.e. static water levels) of well water is maintained, LHPWSS shall conduct a monitoring study before, during and after construction, of any groundwater well within one hundred metres of the pipeline easement which is part of the 2011 Twinning. A landowner may request other groundwater wells which are not otherwise required by LHPWSS to be monitored, to be included. All samples will be taken according to methods and by personnel agreed by LHPWSS and the landowner and analyzed by an independent laboratory. The laboratory report will be made available to the landowner, and to LHPLA with the landowner's authorization.
43. In the event of any decrease in well-water quantity or quality attributable to the construction of the 2011 Twinning, LHPWSS shall implement remediation measures, with the consent of the landowner, for the repair or replacement of the well. Such measures may include:
  - (a) providing a temporary potable water supply during construction in the vicinity of the well where the well is only affected during the construction activities; and
  - (b) providing a permanent potable water supply;
  - (c) restoration or replacement of the well; or
  - (d) compensation for loss of the well.
44. Any dispute with respect to the cause of the reduction in quantity or quality shall be resolved by the LHPWSS pursuant to applicable legislation, including but not limited to the *Safe Drinking Water Act* and the *Ontario Water Resources Act*.

## **XII. COMPENSATION AND CROP MONITORING**

45. In connection with the construction of the 2011 Twinning, LHPWSS shall compensate landowners as follows:

- (a) Crop loss on the permanent easement lands of the 2011 Twinning (based upon a gross return of \$960.00 per acre) are set out as shown in following chart. Calculated crop loss shall be paid by LHPWSS for all easement lands affected by the 2011 Twinning.

Rate of Loss	
100% first year (construction year)	\$960.00 /acre
80% second year	\$768.00/acre
50% third year	\$480.00/acre
40% fourth year	\$384.00/acre
30% fifth year	\$288.00/acre
20% sixth year	\$192.00/acre
Subsequent loss at Present Value of 20%, discounted at 1.5% (\$192.00 /1.5%)	\$12,800.00/acre
Allowance for additional fertilizer and stone- picking	\$ 500.00 /acre
Total Payment per Acre:	\$16,372.00 /acre

- (i) In the seventh, eighth and ninth year after construction, LHPWSS shall implement a crop yield monitoring program which will take representative crop samples on and off easement to be used as the basis for calculating crop loss on all easement lands.
- (ii) If the monitoring program shows an on-easement crop loss of 20% or less in each of the seventh, eighth and ninth year after construction (i.e. three consecutive years) the monitoring program will be discontinued for that property.
- (iii) If the monitoring program shows an on-easement crop loss in excess of 20%, in any of the seventh, eighth and ninth year after construction the monitoring program will be continued for that property until such monitoring program has shown an on-easement crop loss of 20% or less in three consecutive years from the sixth year after construction, following which event, the monitoring program by LHPWSS will be discontinued for that property.



- (iv) The crop yield monitoring program shall be carried out by an expert agronomist acceptable to both LHPWSS and LHPLA. The agronomist will be chosen by the end of the sixth year after construction for a three year term and thereafter for three year terms while the crop monitoring process continues. In carrying out the crop yield program, crop yields are to be assessed using combine monitoring, scales, or another monitoring method as agreed between LHPWSS and the landowner.
- (v) In any year after LHPWSS has discontinued the monitoring program on a property, the landowner may, at his/her expense, have the monitoring program carried out on his/her property by the agronomist chosen pursuant to paragraph 45(a)(iv). If the results of this monitoring program show an on-easement crop loss in excess of 20%, LHPWSS shall reimburse the landowners the cost of the monitoring and pay crop loss compensation for the year in accordance with paragraph 45(a)(iv), and the following provisions apply:
  - (A) In the year following a crop loss greater than 20% identified by the monitoring program paid for by the landowner, LHPWSS shall carry out the monitoring program.
  - (B) If the monitoring program in this first year following shows crop losses of 20% or less, LHPWSS will discontinue the monitoring program.
  - (C) If the monitoring program in this first year following shows crop losses of greater than 20%, LHPWSS shall pay Crop loss compensation pursuant to paragraph 45(a)(vii), and carry out the monitoring program for a second year at its expense.
  - (D) If the monitoring program is carried out by LHPWSS in the second year and it shows crop losses of 20% or less, LHPWSS will discontinue the monitoring program.
  - (E) If the monitoring program is carried out by LHPWSS in the second year and it shows crop losses of greater than 20%, LHPWSS shall pay crop loss compensation pursuant to paragraph 45(a)(vii), and carry out the monitoring program for a third year at its expense.
  - (F) If the monitoring program is carried out by LHPWSS in the third year and it shows crop losses of 20% or less, LHPWSS will discontinue the monitoring program.
  - (G) If the monitoring program is carried out by LHPWSS in the third year and it shows crop losses of greater than 20%, LHPWSS shall pay crop loss compensation pursuant to paragraph 45(a)(vii), and shall continue to monitor for crop loss in accordance with paragraph 45(a)(iii) mutatis mutandi.

- (vi) The landowner is obligated to seed, fertilize and otherwise care for the easement land at least to the same degree that is carried out on the lands that may be used for crop yield comparison in the monitoring study. Failure to do so, shall excuse LHPWSS's obligation to carry out any further monitoring or pay any further compensation for crop loss to the landowner.
- (vii) Commencing in the seventh year after construction and in any year thereafter where the monitoring program demonstrates an on-easement crop loss in excess of 20%, LHPWSS shall pay to the landowner an amount equal to two times the actual loss, for common field crops, in excess of 20%. "Common field crops" in this paragraph 45(a) means corn, soybeans, forages (grasses and legumes), cereal crops (barley, oats, spring wheat, winter wheat, and winter barley); dry edible beans and peas, spring and winter canola, buckwheat, flax, fodder rape, kale, millet, mustard, sorghum, sunflowers and any other crop that is agreed to in advance of its planting, in writing, by LHPWSS and the landowner.

(b) Disturbance damages

LHPWSS shall pay landowners disturbance damages to compensate for interruptions in agricultural field operations, lost time, extra tillage, extra planting, extra cultivation, restricted headlands, extra harvesting and inconvenience of \$5,880.00 per acre calculated on easement lands affected.

(c) Goring, lands affected to the same extent and valve chamber sites

Crop areas affected to the same extent due to "goring" or other physical limitations due to the construction, subsidiary easement rights for special installations that protrude above ground, and physical restrictions to the lands outside of the right-of-way that become permanent due to the location of above-ground fixtures will be compensated as follows:

- (i) 100% of the greater of the appraised market value or \$12,000.00 per acre;
- (ii) crop loss on lands temporarily affected will be calculated based upon gross return of \$960.00 per acre for each year lands are affected
- (iii) compensation for permanent crop loss will be calculated on the basis of the subsequent loss at Present Value of \$960.00 per acre discounted at 1.5 % (\$960/1.5%);
- (iv) the minimum area for calculation of land value and crop loss for valve sites will be 0.5 of an acre and for connection chamber sites will be 1.0 acre.
- (v) with respect to the connecting chamber sites where the parties come to a written agreement subject to approval under the Planning Act, the

landowner may convey title to the lands in exchange for an amount equal to the value of a severed lot as established by an appraisal carried out by an independent appraiser satisfactory to both LHPWSS and the landowner, with costs of the process at the expense of LHPWSS.

(d) Temporary use lands

The parties acknowledge that LHPWSS does not anticipate that LHPWSS will require the temporary use of off easement lands during the 2011 Twinning except for the off easement storage of virgin topsoil as provided in paragraph 10(a)(iv) and for this purpose LHPWSS shall pay to the landowner the following additional compensation:

- (i) 50% of the greater of the appraised market value or \$6,000.00 per acre;
- (ii) annual crop loss calculated in accordance with paragraph 45(a) hereof;
- (iii) 50% disturbance damages calculated in accordance with paragraph 45(b) hereof.

For any other required temporary use of easement lands, LHPWSS shall pay to the landowner the following additional compensation:

- (iv) 50% of the greater of appraised market value or \$6,000.00 per acre;
- (v) Construction and future crop loss calculated in accordance with paragraph 45(a) hereof;
- (vi) 50% disturbance damages calculated in accordance with paragraph 45(b) hereof.

46. LHPWSS shall make payment of compensation amounts to the affected landowners in accordance with the terms of the individual compensation agreements in the form of Schedule "B" to this agreement. All such damages as provided in paragraph 45 hereof shall be paid to each landowner in accordance with the schedule for payment set out in the individual compensation agreement.

47. Land rights compensation and damages with respect to non-agricultural lands, non-renewable resources (e.g. gravel, sand), specialty crops, site specific disturbance and property amenities (including, but not limited to, residences, barns, farm yards, tree rows, etc.) shall be additionally compensated by LHPWSS and, if the amount cannot be agreed, the parties shall submit this issue to dispute resolution in accordance with paragraph 51 hereof.

## **XII. COSTS**

48. LHPWSS shall fund the reasonable legal, consultant and Negotiating Committee costs incurred by LHPLA in connection with the organization of affected landowners, retainer and instruction of independent consultants, the development of the 2011 MOU, and the negotiation of this Letter of Understanding in accordance with the negotiating costs budget attached as Schedule "B" to the 2011 MOU.
49. LHPLA through its solicitors shall render accounts monthly with respect to such costs in accordance with the 2011 MOU or such supplementary budgets as may be agreed upon by the parties. LHPWSS shall pay such accounts within 30 days of receipt. Accounts rendered will include original invoices approved by LHPLA with details of work completed as provided in Schedules "A" and "B" of the 2011 MOU or other approved budget, including the associated expenses with receipts where appropriate. Such costs shall be as agreed between LHPWSS and LHPLA or as assessed on a solicitor and client basis by the local assessment officer of the Ontario Court of Justice at London and shall be payable within 30 days of agreement on the costs or the issuance of the Certificate of Assessment of Costs by the local assessment officer.
50. In addition, LHPWSS will be responsible for the costs of implementing this Agreement, including the following:
  - (a) Paragraph 9(b)(i) – the construction monitor
  - (b) Paragraph 9(b)(ii)– the participation of LHPLA representative(s) on the Joint Committee at the rate of \$125 per hour;
  - (c) Paragraph 9(b)(v) – independent consultant costs;
  - (d) Paragraphs 10(a)(i) – LHPLA consultants' participation in pre-construction soil testing;
  - (e) Costs of using a consultant to obtain signed individual compensation agreements from LHPLA members with lands on the 2011 Twinning in order to obtain the agreements as soon as possible;
  - (f) Paragraph 52 – time (at \$125/hour) and expenses incurred by LHPLA representatives in carrying out their best efforts undertaking to assist in obtaining signed individual compensation agreements from LHPLA members.

### **XIII. DISPUTE RESOLUTION**

51. The dispute resolution protocol set out in Schedule "F" to this Agreement shall apply with respect to any matter in dispute related to or in connection with the 2011 Twinning.

### **XIV. UNDERTAKINGS**

52. The executive members and members of the Negotiating Committee for LHPLA shall use their best efforts to have each of the member landowners sign the individual landowners compensation agreements (which incorporate the terms of this agreement) as soon as possible following their delivery to legal counsel to the LHPLA.
53. The members of the LHPLA shall not impede the construction of the 2011 Twinning, including all activities related thereto, provided that such construction is being carried out in accordance with the terms of this agreement.

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IAN GOUDY  
Chairperson of LHPLA

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Board Chair  
Lake Huron Primary Water Supply  
(LHPWSS)

Chief Administrative Officer  
Lake Huron Primary Water Supply  
(LHPWSS)

**SCHEDULE A**

**LANDOWNERS AFFECTED BY THE 2011 TWINNING**



**SCHEDULE B**

**FORM OF INDIVIDUAL COMPENSATION AGREEMENT**

**FOR**

**2011 TWINNING OF THE LAKE HURON PIPELINE**



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**LAKE HURON PIPELINE 2011 TWINNING PROJECT  
AGREEMENT FOR COMPENSATION**

THIS AGREEMENT made as of the       day of       , 20

BETWEEN;

**LAKE HURON PRIMARY WATER SUPPLY SYSTEM ("LHPWSS")**

OF THE FIRST PART

- and -

("Owner")

OF THE SECOND PART

RECITALS:

WHEREAS the Owner is the owner in fee simple of the lands described as

(the "Owner Lands") which are subject to a water pipeline easement registered in the Land Registry Office for the County of xxxxx by Expropriation Plan or Transfer in favour of Ontario Water Resources Commission (the "Easement") which is now vested in LHPWSS;

AND WHEREAS LHPWSS will construct new water supply works within the Easement (the "Construction") as part of its Lake Huron Pipeline 2011 Twinning Project and the Owner may sustain certain damages as a result of the Construction.

AND WHEREAS the parties have agreed to enter into this Agreement to set out the agreed terms of compensation payable to the Owner by LHPWSS for damages that the Owner may sustain as a result of the Construction

NOW THEREFORE, in consideration of the mutual covenants hereinafter set forth and other good and valuable consideration the parties hereto agree with each other to the following compensation arrangement:

1. The following individuals have been noted to have an equity interest to this compensation, namely:

NTD: Insert names of parties to whom notice of Expropriation would otherwise be given per Expropriations Act:

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- i. registered owner includes an owner of land whose interest in the land is defined and whose name is specified in an instrument in the proper land registry or sheriff's office, and includes a person shown as a tenant of land on the last revised assessment roll registered; and
  - ii. registered encumbrancers which includes a mortgagee, tenant, execution creditor, a person entitled to a limited estate or interest in land, a guardian of property, and a guardian, executor, administrator or trustee in whom land is vested;
  - iii. any party to whom actual notice is had of an interest in the lands.
2. LHPWSS agrees to pay compensation to the Owner and the Owner agrees to accept the compensation amount as detailed in Schedule "A" attached hereto (the "Total Compensation Amount"), subject to paragraph 6 herein, in full and as final settlement of any and all claims that the Owner may have against LHPWSS under the *Expropriations Act*, R.S.O. 1990, c. E.26 resulting from the Construction including without limitation, any claims for injurious affection, disturbance, business loss or other claim for compensation (the 'Claims'). The Owner agrees to permit the Construction to proceed without objection or interference.
3. LHPWSS shall pay jointly to the Owner and all other parties having an equity interest the Total Compensation Amount in equal instalments as follows:
  - a. first payment of \$ \_\_\_\_\_ upon Owner signing Agreement;
  - b. second payment of \$ \_\_\_\_\_ at the start of construction;
  - c. third payment of \$ \_\_\_\_\_ upon Owner signing and delivering a Full and Final Release.
4. The Owner agrees that it shall execute and deliver to LHPWSS the Owner's Full and Final Release at the time of final payment substantially in the form attached hereto as Schedule "B". Execution of the Release is a condition of the payment of the Total Compensation Amount to the Owner.
5. The Total Compensation Amount is calculated in accordance with the compensation terms set out in the Letter of Undertaking between the LHPWSS and LHPLA dated xxxxxxxxxxxxxx (the "LOU"), a copy of which is attached as Schedule "C" hereto, which are the damages and disturbance claims and costs resulting from the Construction as more specifically noted in Schedule "A".
6. LHPWSS acknowledges that the Total Compensation Amount as set out in Schedule "A" includes a category for any other damages, (as set out in paragraph 8 of Schedule "A" attached hereto) which represents construction process unknowns (the "Additional Damages"). While some construction process damages may be anticipated at the time of entering into this Agreement there may be events which are not anticipated. LHPWSS and the Owner agree to update Schedule "A" hereto, to include any agreed upon Additional Damages which become known during the construction process at the time of

the exchange of the third payment and the Full and Final Release referred to in paragraph 3.c herein. Any matter in dispute in the final determination of the Additional Damages will be resolved in accordance with the dispute resolution process setout in the LOU.

7. Attached as Schedules "D" and "E" respectively to this Agreement are the Individual Farm Plan and LHPWSS Site Specific Commitments related to the Construction and forming part of this Agreement. Provisions of the LOU will be followed with respect to the issues raised in these Schedules. In the event of a conflict between the terms of this Agreement and the terms of the LOU, the terms of the LOU shall prevail.
8. It is understood and agreed that there is no representation, warranty, collateral agreement or condition affecting this Agreement or supported hereby other than as expressed herein in writing.
9. This Agreement is to be read with all changes of gender or number as required by the context.
10. This Agreement and everything herein contained shall extend to, bind and enure to the benefit of the heirs, executors, administrators, successors and assigns (as the case may be) of each of the parties hereto.
11. The Owner agrees to give written notice of this Agreement to any potential purchaser of the Owner Lands or any part thereof and further agrees to advise LHPWSS of any potential sale of the Owner Lands until such time as the Construction is completed, the Owner has executed the Release and the Total Compensation Amount has been paid to the Owner. LHPWSS retains the right to place notice of this agreement on title.
12. Time shall in all respects be of the essence hereof.
13. Any notice to be given under this Agreement, shall be in writing and shall be delivered in person or sent by facsimile or prepaid registered mail addressed

to the Owner at:

and to LHPWSS at:

Lake Huron Area Primary Water Supply  
235 North Centre Road  
Suite 200  
London, Ontario, N5X 4E7

or at such other address as the Owner and LHPWSS may from time to time designate. Any such notice shall be conclusively deemed to have been given and received upon the same day if personally delivered or sent by facsimile or, if mailed, three (3) business days after the same is mailed. Any party may at any time by notice in writing to the other change the address for service of notice.

IN WITNESS whereof the parties have executed this Agreement for Compensation as of the date first written above.

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Owner:

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Board Chair  
Lake Huron Primary Water Supply  
(LHPWSS)

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Chief Administrative Officer  
Lake Huron Primary Water Supply  
(LHPWSS)

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**SCHEDULE "A"**  
**LAKE HURON PIPELINE 2011 TWINNING PROJECT**  
**AGREEMENT FOR COMPENSATION**

Calculation of the Total Compensation Amount is as follows:

1.	Crop loss (calculated in accordance with par. 45(a) of the LOU: approximately ____ acres @ \$16,372.00 per acre	
2.	Disturbance damages (calculated in accordance with par. 45(b) of the LOU): approximately ____ acres @ \$5,880.00 per acre	
3.	<p>Goring, lands affected to the same extent and valve chamber sites (calculated in accordance with par. 45(c) of the LOU): approximately ____ acres @</p> <ul style="list-style-type: none"> <li>i. 100% of the greater of the appraised market value or \$12,000.00 per acre;</li> <li>ii. crop loss on lands temporarily affected will be calculated based upon gross return of \$960.00 per acre for each year lands are affected</li> <li>iii. compensation for permanent crop loss will be calculated on the basis of the subsequent loss at Present Value of \$960.00 per acre discounted at 1.5% (\$960/1.5%);</li> <li>iv. the minimum area for calculation of land value and crop loss for valve sites will be 0.5 of an acre and for connection chamber sites will be 1.0 acre.</li> <li>v. with respect to the connecting chamber sites where the parties come to a written agreement subject to approval under the Planning Act, the landowner may convey title to the lands in exchange for an amount equal to the value of a severed lot as established by an appraisal carried out by an independent appraiser satisfactory to both LHPWSS and the landowner, with costs of the process at the expense of LHPWSS.</li> </ul>	

4.	<p>Temporary use lands (calculated in accordance with par. 45(d) of the LOU):</p> <p>For storage of virgin topsoil:</p> <ul style="list-style-type: none"> <li>i. 50% of the greater of the appraised market value or \$6,000.00 per acre;</li> <li>ii. annual crop loss calculated in accordance with paragraph 45(a) of the LOU;</li> <li>iii. 50% disturbance damages calculated in accordance with paragraph 45 (b) of the LOU.</li> </ul> <p>For any other required temporary use of easement lands, LHPWSS shall pay to the landowner the following additional compensation:</p> <ul style="list-style-type: none"> <li>iv. 50% of the greater of appraised market value or \$6,000.00 per acre;</li> <li>v. Construction and future crop loss calculated in accordance with paragraph 45(a) of the LOU;</li> <li>vi. 50% disturbance damages calculated in accordance with paragraph 45 (b) of the LOU.</li> </ul>	
5.	<p>Other Land rights compensation and damages with respect to non-agricultural lands, non-renewable resources (e.g. gravel, sand), specialty crops, site specific disturbance and property amenities (including, but not limited to, residences, barns, farm yards, tree rows, etc.)</p>	
6.	<p>Reduction of crop areas due to construction 'headlands', will be based on a rate of 50% of the crop loss rate used in the adjacent right-of-way area. The area will be calculated by multiplying the length of the right-of-way by a width of 60 feet on each side of the right-of-way.</p>	
7.	<p>Reasonable legal fees to a maximum of \$500.00 per property owner, will be reimbursed upon proof of invoice paid, where landowner is not represented by LHPLA and seeks separate legal advice with respect to this Agreement.</p>	
8.	<p>In addition, compensation shall be considered on an Individual basis for any other damages, as a natural and reasonable consequence of the Construction not otherwise remediated or compensated by LHPWSS or its agents including: additional temporary use lands; permanent or temporary loss of access; loss or damage of landscaping, garden areas, decorative fences, and, septic or other service items provided there is in advance a signed agreement between the Owner and LHPWSS for any work or access to be claimed off easement. Such further agreement will include the requirement for adequate proof of claim to be submitted.</p>	
9.	<p>The Total Compensation</p>	

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**SCHEDULE "B"**  
**LAKE HURON PIPELINE 2011 TWINNING PROJECT**  
**AGREEMENT FOR COMPENSATION**

**FULL AND FINAL RELEASE**

**TO: Lake Huron Primary Water Supply System (hereinafter singularly "LHPWSS"), The Members of the Joint Committee of Lake Huron Primary Water Supply System, their officers, directors, employees, servants and agents and the Council Members of each member Municipality of Lake Huron Primary Water Supply System and their respective Officers, Directors, Employees, Servants and Agents (all collectively herein the "RELEASEES")**

**FROM: (collectively herein  
OWNER/RELEASOR")**

WHEREAS the Owner/Releasor is the owner in fee simple of (the "Owner Lands") which are subject to a water pipeline easement registered In the Land Registry Office for the County of xxxxx by Expropriation Plan or Transfer in favour of Ontario Water Resources Commission (the 'Easement');

AND WHEREAS the interest of Ontario Water Resources Commission in the Easement was first transferred in or about November 1993, to a crown agency, namely the Ontario Clean Water Agency and then further transferred in or about 2000, pursuant to a Minister of the Environment Transfer Order granted under subsection 2(6) of the Municipal Water and Sewage Transfer Act, 1997 in favour of The Corporation of the City of London, in Trust for the LHPWSS;

AND WHEREAS the LHPWSS will construct new water supply works within the Easement (the "Construction") as part of its Lake Huron Pipeline 2011 Twinning Project and the Owner/Releasor may sustain certain damages as a result of the Construction;

AND WHEREAS the Owner/Releasor has agreed to accept payment of the amount of \$ in full and final settlement of all claims arising from the Construction which the Owner/Releasor would be entitled to claim under and by virtue of the *Expropriations Act*, R.S.O. 1990, c. E.26 and the Owner/Releasor has agreed to provide this Full and Final Release.

NOW THEREFORE, IN CONSIDERATION of the payment or of the promise of payment by LHPWSS to Owner/Releasor of the sum of /00 Dollars (\$00), as well as good and valuable other consideration which is hereby acknowledged, the Owner/Releasor hereby releases and forever discharges the Releasees of and from any and all actions, causes of actions, suits, proceedings, debts, dues, accounts, covenants, contracts, claims, liabilities and demands whatsoever, whether at law or equity which the Owner/Releasor may

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now have, or hereinafter may, can or shall have under the *Expropriations Act*, R.S.O. 1990, c. E.26, against the Releasees for damages, compensation, loss or injury in connection with, or in any way arising from Construction, including without limitation, any claim for injurious affection, disturbance, business loss or other claim.

AND FOR THE SAID CONSIDERATION, the Owner/Releasor further agrees not to make any claim or take any proceedings in relation to this matter against any other person or corporation who might claim contribution or indemnity thereto from the Releasees.

IT BEING UNDERSTOOD BY LHPWSS AND THE OWNER/RELEASOR that notwithstanding the foregoing, that it is the intention of LHPWSS and the Owner/Releasor that the provisions of the agreement entitled "Letter of Undertaking" dated \_\_\_\_\_, 2012 between LHPWSS and the Lake Huron Pipeline Landowners' Association shall survive to the extent that any obligation thereunder has not been completed at the time of execution of this Release.

AND FOR THE SAID CONSIDERATION the Owner/Releasor further agrees and undertakes to indemnify and save harmless the Releasees from any and all actions, causes of action, claims and demands which may be made against the Releasees arising from the Construction, which by this instrument are released.

This Full and Final Release and the covenants and undertaking herein contained on the part of the Owner/Releasor shall be binding upon the Owner/Releasor and upon the Owner/Releasor's heirs, executors, trustees, successors and assigns, as owners and occupiers of the Owner Lands from time to time and shall enure to the benefit of the Releasees and their respective successors and assigns.

DATED AT \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_, 201 \_\_\_\_\_.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Witness



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**SCHEDULE "C"**  
**LAKE HURON PIPELINE 2011 TWINNING PROJECT**  
**AGREEMENT FOR COMPENSATION**

**ATTACH COPY OF THE LOU**

- 10 -

**SCHEDULE “D”**  
**LAKE HURON PIPELINE 2011 TWINNING PROJECT**  
**AGREEMENT FOR COMPENSATION**

**INDIVIDUAL FARM PLAN**

- 11 -

**SCHEDULE “E”**  
**LAKE HURON PIPELINE 2011 TWINNING PROJECT**  
**AGREEMENT FOR COMPENSATION**

**SITE SPECIFIC COMMITMENTS**

**SCHEDULE "C"**  
**CONSTRUCTION MONITOR SCOPE OF WORK**

## SCOPE OF WORK FOR THE CONSTRUCTION MONITOR ROLE

In concert with the construction of the pipeline, a construction monitor role and associated on-site soil investigations prior to and following the proposed pipeline construction is proposed to evaluate the impacts of the construction activities on agricultural soils on each of the approximate 24 affected properties. The Letter of Undertaking and associated farm plans prepared for the landowners will be the primary reference for the construction monitor to ensure construction activities are acceptable in ensuring agricultural management practices and the soil resource are not negatively affected.

The scope of work proposes to employ the construction monitor on each individual property when significant activities related to topsoil stripping, stockpiling, access and land remediation are conducted. The construction monitor will oversee the construction activities and provide communication between the landowner, the LHPWSS and ultimately the pipeline contractor. The monitor will have access to the reports from the pre construction soil sampling which have already been completed and will also conduct the required pre and post construction soil sampling activities as agreed between the LHPWSS and LHPLA.

The following tasks encompass the proposed scope of work:

1. Review Letter of Undertaking and associated farm plans for subject properties and proposed construction and remediation methods
2. Review reports on existing on-site soil testing and conduct any outstanding required on-site testing to determine existing soil conditions within and outside the corridor prior to construction to include a minimum of: soil mixing, compaction, fertility, SCN, organic matter, texture, pH, calcium carbonates. New testing to be done pre construction only if not already obtained in the preliminary investigative process so that there is not duplication.
3. Monitor construction activities relative to the Letter of Undertaking and associated farm plans for each property at the time of significant construction and remediation activities
4. Consult with each of approximately 24 landowners during construction to relate site conditions and site specific issues and communicate landowner issues to the LHPWSS and the pipeline contractor, including recommendation of corrective or remedial measures
5. Conduct on-site soil testing to determine post construction soil conditions to include: soil mixing, compaction, fertility, SCN, organic matter, texture, pH, calcium carbonates.
6. Consult with each of approximately 24 landowners after construction to relate site conditions and site specific issues of remediation and communicate landowner issues with the LHPWSS and the pipeline contractor
7. Prepare interim and final reports to LHPWSS for distribution to LHPLA, commenting on landowner issues and the resolution, and how the activities documented in the Letter of Undertaking have been achieved

**SCHEDULE "D"**

**STANDARD DRAWING 1 (where no off easement temporary storage required)**

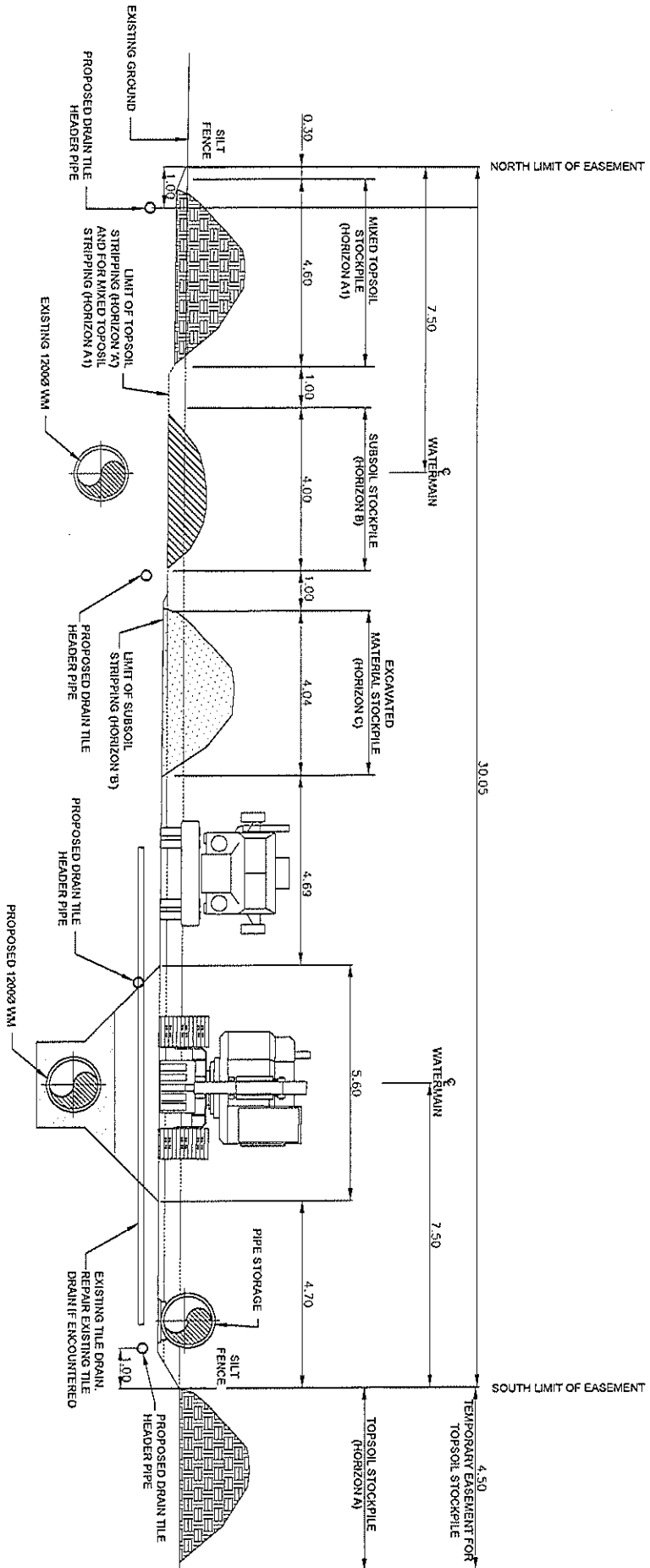


1. TOPSOIL HORIZONS A & A1 TO BE SEPARATED ON EACH SIDE OF THE TRANSMISSION MAIN, SOME LOADING ON THE EXISTING PIPE MAY BE REQUIRED.
2. STRIPPING LIMITS AND TOPSOIL PILES SHOWN MAY VARY IN SIZE & LOCATION DEPENDING ON THE ACTUAL DEPTHS OF VARIOUS LAYERS ENCOUNTERED AND IF MIXED TOPSOIL IS ENCOUNTERED.
3. DRAINAGE TILE MATERIAL, PIPE LOCATION & DIAMETER SUBJECT TO FIELD VERIFICATION.
4. TILE DRAIN HEADER AND ASSOCIATED PIPING SHALL BE INSTALLED FOLLOWING THE COMMISSIONING OF THE TRANSMISSION MAIN PRIOR TO RESTORATION OF THE HORIZON A SOIL.

**SCHEDULE "D"**

**STANDARD DRAWING 2 (where off easement temporary storage required)**





# NOTE:

## TYPICAL EASEMENT SECTION

1. TOPSOIL HORIZONS A & A1 TO BE SEPARATED ON EACH SIDE OF THE TRANSMISSION MAINS, SOME LOADING ON THE EXISTING PIPE MAY BE REQUIRED.
2. STRIPPING LIMITS AND TOPSOIL PILES SHOWN MAY VARY IN SIZE & LOCATION DEPENDING ON THE ACTUAL DEPTHS OF VARIOUS LAYERS ENCOUNTERED AND IF MIXED TOPSOIL IS ENCOUNTERED.
3. DRAINAGE TILE MATERIAL, PIPE LOCATION & DIAMETER SUBJECT TO FIELD VERIFICATION.
4. TILE DRAIN HEADER AND ASSOCIATED PIPING SHALL BE INSTALLED FOLLOWING THE COMMISSIONING OF THE TRANSMISSION MAIN PRIOR TO RESTORATION OF THE HORIZON A SOIL.

**SCHEDULE "E"**

**TEMPORARY EASEMENT AGREEMENT FORM**

**GRANT OF TEMPORARY EASEMENT AND CONSENT TO ENTER**

BETWEEN

LAKE HURON PRIMARY WATER SUPPLY SYSTEM

(Hereinafter the "LHPWSS")

AND

**[INSERT OWNERS NAMES]**

(Hereinafter the "Owner(s)")

RE: Temporary Easement and Access on and over [INSERT PROPERTY REQUIRED FOR TEMPORARY EASEMENT AND ATTACH A PLOT PLAN OF TEMPORARY EASEMENT AS SCHEDULE "A"] (the "Property"), a plan of which is attached as Schedule "A" hereto.

**WHEREAS** LHPWSS is the successor to the Ontario Clean Water Agency ("OCWA") with respect to the ownership and operation of the Lake Huron Water Supply System, including the Lake Huron Pipeline;

**AND WHEREAS** LHPWSS is proceeding to twin certain sections of the Lake Huron Water Supply System within the existing easement (the "2011 Twinning");

**AND WHEREAS** Lake Huron Pipeline Landowners Association ("LHPLA") is a voluntary association representing the interests of certain Lake Huron Pipeline landowners including a number of Landowners who are affected by the 2011 Twinning;

**AND WHEREAS** LHPLA obtained the authority of a number of the landowners affected by the 2011 Twinning, acting as their representative agent, to enter into a Letter of Undertaking to set out the resolutions agreed upon with respect to matters of construction, rehabilitation, compensation and cost affecting properties subject to the 2011 Twinning (the "2011 LOU") including matters pertaining to any required temporary easements and access over lands of LHPLA members which was outside of the existing easement;

**AND WHEREAS** LHPWSS requires a temporary easement and access over the Property to facilitate the work to be undertaken to complete the 2011 Twinning;

**AND WHEREAS** the Owner has agreed to grant such temporary easement and access on the terms negotiated in the 2011 LOU and as more particularly set out herein.

NOW THEREFORE, the LHPWSS and Owner(s) agree as follows:

1. The Owner(s) of the Property hereby grants, subject to the terms and conditions set out in the 2011 LOU, the full, right, liberty, privilege and temporary easement to the LHPWSS, its servants, agents, work people, contractors and others designated by it, with or without tools, machinery, equipment, and vehicles on and over the Property, for the purpose of facilitating the 2011 Twinning construction for a consideration of \_\_\_\_\_, in accordance with paragraph 45(d) of the 2011 LOU, payable thirty (30) days before the commencement of the use by LHPWSS or its representatives.

2. This Consent shall run from the commencement of construction for a term of two (2) years or until the 2011 Twinning is complete, whichever shall first occur.
3. As soon as reasonably possible after the construction of the 2011 Twinning, LHPWSS shall remove all debris and level and restore the Property to its former state so far as is reasonably possible, save and except for items in respect of which compensation is due under paragraph 1 hereof. LHPWSS shall also restore any gates and fences interfered with around the Property as closely as reasonably possible to the condition in which they existed immediately prior to such interference.
4. LHPWSS agrees to indemnify, defend with counsel and save harmless from and against any and all claims, liabilities, demands, and cause of action of every kind and character, including claims of creditors of LHPWSS, liability on account of injury to, or death of, persons or damage of property and all costs and expenses of investigation and defence and all fines, fees, penalties, interest, judgements, compromises, settlements, other costs and legal fees incurred by in defence of same, on the count of or in any way incident to the use of the said property by LHPWSS pursuant to this Consent.
5. LHPWSS hereby accepts the above Grant of Temporary Easement and Consent to Enter and agrees to carry out the same on the terms and conditions herein contained and as more particularly provided for in the 2011 LOU.
6. This Agreement shall be binding upon and enure to the benefit of Owner(s), and his/her/their successors and assigns and shall be binding upon and enure to the benefit of the LHPWSS and its successors and assigns.

DATED at the                      of                      this                      day of                      2012.

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OWNER(S) NAME

---

Board Chair  
Lake Huron Primary Water Supply  
(LHPWSS)

Chief Administrative Officer  
Lake Huron Primary Water Supply  
(LHPWSS)

**SCHEDULE "A"**  
**TO**  
**GRANT OF TEMPORARY EASEMENT AND CONSENT TO ENTER**  
**PLOT PLAN OF TEMPORARY EASEMENT**

**SCHEDULE “F”**  
**DISPUTE RESOLUTION PROCESS**

## SCHEDULE "F"

### DISPUTE RESOLUTION PROCESS

Step 1: The party initiating the dispute resolution process (the "Initiator") shall provide an outline of the issues and the understandings of the matter which is the subject matter of the dispute between the parties in writing of no more than five (5) pages, summarizing their perspective on the dispute to the Joint Committee. The party initiating the process shall deliver a copy of such outline to the other party to the dispute (the "Responder").

Step 2: The Responder shall have 15 business days from receipt of the correspondence from the Initiator to respond in writing outlining a response to the issues and the understandings provided by a written summary of no more than five (5) pages summarizing their perspective on the dispute to the Joint Committee

Step 3: The Initiator shall request a meeting of the Joint Committee to be held 15 business days after delivery of the correspondence from the Responder setting out the time and the location for the meeting and such matter in dispute shall be included on the agenda of the special meeting of the Joint Committee. At the meeting the parties will seek to resolve the dispute based upon the correspondence delivered.

Step 4: If at the meeting held under step 3 above, the dispute has not been resolved, then the dispute may be submitted by request of either party to mediation. Both parties shall have 15 business days to notify the other of their request to submit the dispute to mediation. If the parties can agree upon a single mediator within 5 days of submission of the request then a single mediator will be appointed by agreement of the parties. Failing agreement upon the appointment of a mediator, the Responder will provide a slate of three names from which the Initiator will select a single mediator who will then be appointed for this specific matter.

Step 5: Within 15 business days following the mediator's appointment the mediator shall fix a time and a place for the purpose of conducting the mediation. The mediator shall submit the final mediation report to the parties within 45 business days from the first mediation meeting. All relevant documents, as well as the meeting minutes of the Joint Committee, will be submitted to the mediator for consideration. The mediation event may be attended by the members of Joint Committee, the relevant staff of the Administering Municipality for the LHPWSS, and the specific landowner(s) involved in the dispute, together with respective legal counsel for the parties. All communications and information forming part of the mediation shall be held in confidence save and except a settlement agreement for the purpose of enforcing same. Any agreement reached shall be reduced to writing. Responsibility for the cost of the mediator, the cost of counsel for both parties and the Joint Committee members shall be borne by LHPWSS if there is an agreement reached by mediation.

Step 6: If the dispute has not been resolved with the assistance of the mediator, the dispute may then be submitted by either party to binding arbitration. Binding arbitration shall be conducted in accordance with the *Arbitration Act, 1991*, S. O. 1991, c.17, as amended from time to time. In the event that the dispute is not resolved by mediation and proceeds to binding arbitration, the members of the Joint Committee and the parties will not call the mediator as a witness for any purpose and will not seek access to any documents prepared or delivered to the mediator in connection with the mediation, including any records or notes of the mediator. Statements made

by any person and documents produced in the mediation not otherwise discoverable shall not be subject to disclosure through discovery or any other process and shall not be admissible into evidence in any context for any purpose. It shall be a condition precedent to the right of a party to submit a matter in dispute to binding arbitration that such party shall have given written notice of its intention to do so and such written notice shall state the particulars of such dispute. Within ten (10) Business Days of such notice being provided, the parties shall mutually appoint an arbitrator to determine the dispute, failing agreement an arbitrator shall be appointed in accordance with the provisions of the *Arbitration Act, 1991*, S. O. 1991, c.17. Once appointed the arbitrator shall fix a time, which shall not be later than ten (10) business days following the appointment, and a place in London, Ontario, for the purpose of hearing the evidence and representations of the parties. Each of the parties shall co-operate with the arbitrator and shall provide the arbitrator with information in their possession or under their control necessary or relevant to the matter being determined. Within ten (10) business days after the conclusion of the arbitration hearing, or such longer period as may be required by the arbitrator appointed, the arbitrator shall make an award and reduce the same to writing and deliver one copy of the decision to each party.

There shall be no right of appeal from the arbitrator's award except in accordance with the *Arbitration Act, 1991* S. O. 1991, c.17. The parties agree that a judgment upon the arbitration award may be entered in any court in Canada or any court having jurisdiction, or that an application may be made to such court for judicial recognition of the award and/or an order of enforcement thereof. The parties agree that the arbitrator selected shall determine costs (legal fees and disbursements) for the unsuccessful precursor mediation process and the arbitration process as part of the arbitrator's award.



## 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.

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**GAPLO-UNION (STRATHROY-LOBO)**

**WRITTEN EVIDENCE OF  
IAN GOUDY**

**March 31, 2006**

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March 31, 2006

My parents' land at the north-half of Lots 21 and 22 in the former London Township, which was first farmed by my mother's family in the 1840's, was expropriated in 1957 for a 26" natural gas pipeline. Union Gas drew up the agreement it offered, which talked of ingress and egress, full and final release, and Union's right to set the compensation level. The landowner was told if you try to fight this you will risk losing what is on the table, and if you put up a big enough fight you may lose your farm. We were expropriated.

With that construction, woodlots were cleared; the trench was dug; the pipeline installed; the trench filled; easement leveled; and, drains repaired. A lot of this work was done in very wet conditions because of construction took place in the late fall. At the time, I thought it was interesting to watch all of this large equipment driving through mud over top of their tracks. When one piece of equipment would get stuck they would just bring something larger in. At the time we did not have any idea of how much damage was being caused to our soils.

The following year (1958), the easement surface was very irregular because of the subsidence and erosion resulting from the construction. When we finally tilled the easement, we began to see an excess of stone on the easement lands as well as a distinct difference of soil colour on and off easement. When we planted a crop on this easement, we immediately realized something terrible had happened to the productivity of these soils. In some areas there was no yield at all. Also, we now constantly had to pick stones on the easement, and we had to go much slower with our equipment or we risked destroying it.

The woodlot that was cleared in 1957 remained a wasteland until 1991 when the 48" line was built. This was because of the location of the pipeline and the restriction of establishing woodlot on the easement. The compensation my parents received for the 1957 construction project and easement damages was something less than \$1000.00 in total. I was ten years old when that line went through.

In 1964, my parents were notified that a second pipeline was to be built on our property. This line would be 34" in diameter and be built using the same methods as the 26" line. Once again expropriation took place and the pipeline was built. I remember the extreme frustration my father experienced in trying to have things done better that time. His efforts were to no avail. More woodlot was cleared creating more wasteland. The damage to the soils was a repeat of 1957 construction – in other words, a doubling of the damage. I can recall that some neighbors put up opposition to the construction, and were threatened by the police with arrest if they persisted. People were upset, but didn't seem to have any rights or recourse. I was seventeen years old when the second line went through.

In 1976, Stuart O'Neil and Peter Lewington took Interprovincial Pipelines to court over topsoil damage and won their case. This ruling indicated I.P.L. was obligated to pay \$10,000.00 per acre for complete topsoil replacement on their farms. This development came about only after a number of year's preparation and considerable personal financial risk to both landowners. That decision became a precedent for much of what followed afterward.

In 1974, I took over my family's farm from my parents. In 1979, word came that a third pipeline, 42" in diameter would be built on the easement. With evidence from the O'Neil and Lewington case, I appeared at the OEB hearing in London. We requested that total easement top soil stripping take place to prevent further damage to what had occurred on the 26" and 34" lines. The OEB agreed to this and so this was an option in the agreement. The land and compensation damage was increased to about \$2,200.00 per acre. I disagreed with the crop loss compensation and so once again our land was expropriated. In 1984, after spending much time and legal expense in trying to improve the crop loss compensation, I was finally forced to accept what I was originally offered. We learned some lessons about top soil stripping from this construction for future construction. We learned that you must segregate all three horizons of soil, and that the displaced soil from the pipe must be removed to prevent crowning of the soil over the pipeline. Other measures to protect the topsoil from erosion and subsidence after construction were also needed. There was some improvement in this construction over the previous constructions. After this construction I had made up my mind that if another pipeline ever came I would push even harder for our rights. I was thirty-three years old when the third line was constructed.

Shortly after this, I decided I needed an outlet for the drains in the back part of our property. This drain would have cost me around \$600.00 to install, but because of the wall effect of the pipelines there was no way of getting the water from one side to the other. I had a meeting with a Union Gas representative and one of their lawyers on site to explain the problem. At that meeting I was told that because my parents had never indicated in 1957 we would need a drain through that area Union was not responsible. We ended up applying for a municipal drain, which cost close to \$7,000.00 to install

Around 1990, Union notified us again that they were going to build a fourth line 48" in diameter. By this time the government had introduced intervenor funding. A landowners' group was formed to go to the OEB hearing collectively and argue the issues of compensation issues and damage. Although I agreed with many of the group's issues, I thought that the argument should be put forward that our properties had suffered enough already, and maybe Union should be required to find another route. I hired my own lawyer and ended up participating in a fairly extensive hearing. Once again, as with the third construction and the O'Neil and Lewington case, this was very time consuming and was a big personal financial risk. Because of that hearing, there were improvements made on compensation, treatment of the easement, woodlots, and drainage in comparison to what we experienced with the previous pipelines. A lot of this came about through our access to legal and expert support, and intervenor funding. This was the first Union Gas

pipeline for which our property was not expropriated. I was forty-three years old when the fourth pipeline went through.

Our property also has the two Lake Huron to London water pipelines, which dissect the Union lines. These pipes measure 56" outside diameter. When the most recent line was built, Ecological Services (now Stantec) was the environmental firm the Ontario Clean Water Agency used to monitor the construction. Because OCWA could not operate equipment over the Union Gas easement, the water line had to be bored underneath the gas lines. A construction that would normally have taken only a few days ended up taking more than two months in some of the wettest conditions possible. This unfortunate situation end up impacting properties both sides of the Union easement all the way to the concession roads on the north and south. A situation arose during this period resulting from Ecological Services inaction during wet weather and wet soil conditions. An irate machine operator put my life in some considerable danger.

In the mid to late 90s a new issue arose for pipeline landowners. This issue concerned the repair and maintenance of the pipelines. When the pipelines were originally built, Union Gas land agents indicated these pipelines would last forever. We are now finding out that some pipes are starting to corrode and require maintenance. It upset many landowners, including me, to think that now Union would be back to open the easement up again. Once again we as landowners had to mobilize and so we formed the Gas Pipeline Landowners of Ontario (GAPLO). With a lot of time and effort we were able to work out the Integrity Dig Agreement with Union Gas. This agreement has served as one of the very few bright spots in pipeline landowner relations on the issue of repair and maintenance of pipelines.

More recently new issues have come to light. These issues have to do with abandonment and talk of restrictions of mobile equipment over top of these pipelines. The wording is a little stronger on NEB controlled pipelines, but restrictions are still a real concern to the landowners on the Dawn-Trafalgar pipeline corridor. It is because of these issues that once again we, as landowners, feel we have to speak up to protect our rights.

Having pipeline easements and pipelines running through your property like we do is a never-ending challenge financially, emotionally and physically, which I am sure most people do not realize. And those challenges are ones that we didn't ask for, but we have to respond at our own expense. I think it is very clear that if it had not been for the persistence and sacrifice of many landowners over the years, we would still see pipelines being built the way the original pipelines were built. I am now 59 years old.

A handwritten signature in dark ink, appearing to read "Ian Goudy", written over a horizontal line.

Ian Goudy

ONTARIO FUEL BOARD

IN THE MATTER OF The Gas Pipe Lines  
Act, Statutes of Ontario (1951) 15  
George VI, Chapter 30, as amended,

AND IN THE MATTER OF an Application  
by Union Gas Company of Canada, Limited,  
to the Ontario Fuel Board for approval  
of the Board to deposit in the proper  
Registry Office a copy of the Certificate  
of Public Convenience and Necessity  
granted by the Board to the Company  
under date of June 12, 1957 and a plan  
and description of land which the  
Company desires to acquire by expropriation  
under the above-mentioned Act  
for the construction, maintenance and  
operation of its line and upon, under  
or over which the Company desires to  
construct, lay, carry or place its line.

NOTICE OF HEARING

The Ontario Fuel Board hereby appoints Wednesday, the 25th day of September, 1957, at 10:00 o'clock in the forenoon, Daylight Saving Time, at the County Council Chambers, County Building, City of London, in the County of Middlesex, and Province of Ontario for hearing of the Application, a copy of which is hereunto attached, and all persons interested therein.

Further particulars may be obtained at the office of the Applicant, the Solicitors for the Applicant, Messrs. McNevin, Gee & O'Connor, Chatham, Ontario, or this Board.

DATED at Toronto this 11th day of September, 1957.

ONTARIO FUEL BOARD

"A. R. Crozier"

"W. R. Howard"

IN THE MATTER OF The Gas Pipe Lines  
Act, Statutes of Ontario, (1951) 15  
George VI, Chapter 30, as amended,

AND IN THE MATTER OF an Application  
by Union Gas Company of Canada, Limited  
to the Ontario Fuel Board for approval  
of the Board to deposit in the proper  
Registry Office a copy of the Certifi-  
cate of Public Convenience and Necessity  
granted by the Board to the Company  
under date of June 12, 1957 and a plan  
and description of land which the Com-  
pany desires to acquire by expropriation  
under the above mentioned Act for the  
construction, maintenance and operation  
of its line and upon, under or over which  
the Company desires to construct, lay,  
carry or place its line.

-:

APPLICATION

:-

TAKE NOTICE that Union Gas Company of Canada, Limited  
has applied to the Ontario Fuel Board pursuant to Section 4 of The  
Gas Pipe Lines Act, Statutes of Ontario (1951) 15 George VI, Chapter  
30, as amended, for approval of the Board to deposit in the proper  
Registry Office a duly attested copy of the Certificate of Public Convenience  
and Necessity issued by the Board to the Company under date of June 12, 1957  
together with a duly attested and signed plan and description of certain lands  
in which the Company desires to acquire by expropriation under the said Act  
a limited estate, right or interest, a copy of which plan and description and a  
definition of which limited estate, right or interest are hereunto attached.

DATED at Chatham, Ontario this ~~12th~~<sup>12th</sup> day of ~~September~~<sup>September</sup>, 1957.

Union Gas Company of Canada, Limited

By McNevin, Gee & O'Connor,  
Barristers, etc.,  
Bank of Montreal Bldg.,  
CHATHAM, Ontario,

Its Solicitors Herein.

TO:- Margaret Florence Goudy ✓  
Joseph E. Needham

re:- ~~parts~~  
~~21 & 22~~  
Lot ; Concession  
Township of ~~London~~  
County of ~~Middlesex~~

IN THE MATTER OF The Gas Pipe Lines  
Act, Statutes of Ontario (1951) 15  
George VI, Chapter 30, as amended,

AND IN THE MATTER OF a plan and  
description of land required by  
Union Gas Company of Canada, Limited  
in connection with the establishment  
of a pipeline for the transmission  
of gas between a point in Lot #25,  
in the 2nd Concession of the Township  
of Dawn, in the County of Lambton and  
the Townline Road between the Counties  
of Halton and Peel, with certain branch  
lines therefrom, pursuant to Certificate  
of Public Convenience and Necessity  
dated the 12th day of June, 1957,  
granted by the Ontario Fuel Board.

DEFINITION OF  
ESTATE, RIGHT or INTEREST REQUIRED

A right, liberty and easement in perpetuity on, over, along, in, under and through a strip of land ~~Sixty~~ <sup>Sixty</sup> Feet (60') in perpendicular width as set forth in the attached description dated the ~~5th~~ <sup>5th</sup> day of ~~September~~ <sup>September</sup>, 1957 signed by ~~J. D. Barnes~~ <sup>J. D. Barnes</sup>, O.L.S. and attested by the seal of Union Gas Company of Canada, Limited under the hands of its proper signing officers in that behalf hereunto attached as Schedule "A" and made part hereof, and, as shown within the "red" border on the attached plan dated the ~~5th~~ <sup>5th</sup> day of ~~September~~ <sup>September</sup>, 1957 signed by ~~J. D. Barnes~~ <sup>J. D. Barnes</sup>, O.L.S. and attested by the seal of Union Gas Company of Canada, Limited under the hands of its proper signing officers in that behalf, which plan forms part and parcel of such description and is hereunto attached as Schedule "B", for all or any of the purposes of ingress and egress at any time or times with or without vehicles, machinery, plant and equipment and of surveying, laying, constructing, maintaining, inspecting, patrolling, altering, removing, replacing, reconstructing, repairing, moving, keeping, using and operating a buried pipeline for the transmission of gas (together with all buried attachments, appliances for cathodic protection, equipment and appurtenances necessary thereto) including the right along such strip of land to leave exposed any pipeline with its said appurtenances in crossing any ditch, stream or gorge, and, including the right to make temporary openings in any fence or tile drain along or across such strip of land for any of the purposes aforesaid, but expressly excluding the right to fence in all or any part of such strip of land except to restore any fence interfered with; subject to the aforesaid purposes and rights, RESERVING to the landowner from time to time or person or persons entitled thereto, the right to fully use, occupy and enjoy such strip of land, except as to any excavating, drilling, installing or erecting therein or thereon of any pit, well, foundation, building or other structure or installation apart from installing lanes, roads, driveways, pathways and walks without interference with the said pipeline and apart from constructing, repairing, using and operating farm or domestic tile drains in and constructing, repairing and keeping fences in and on such strip of land, without interfering with the said pipeline. THE WHOLE TO BE subject to items (i) to (iv) inclusive of the terms and conditions set forth in the Certificate of Public Convenience and Necessity granted by the Ontario Fuel Board to Union Gas Company of Canada, Limited the 12th day of June, 1957.

SCHEDULE 1

ALL JO BIRTHDAY that certain parcel or tract of land and premises, situate, lying and being in the Township of London, in the County of Middlesex, in the Province of Ontario, and being composed of Part of Lots 21 and 22, Concession 9, in the said Township and which said parcel of land containing by measurement Five and One Hundred and Forty-eight one-thousandths acres (5.148 ac.) be the same, more or less, being a strip of land sixty feet (60') in perpendicular width, which Centre Line and Centre Line produced of the said strip of land is located as follows:

BEARING 183° 00' 00" and are referred to the meridian through the south-west corner of Lot 1, Concession 5, Township of London:

COMMENCING at a point in a post and wire fence bearing the line between Lots 22 and 23, distant Thirty feet (30') measured northerly thereon from its intersection with the southerly limit of the north half of Lot 22, and said point of commencement being also distant Two thousand, One Hundred and Thirty feet (2130') measured northerly thereon from the north-west corner of Lot 22, Concession 9:

THENCE North Fifty-eight degrees, Twenty-two minutes, Thirty seconds, East ( $N58^{\circ}22'30"E$ ) a distance of One hundred and Four and Twenty-eight one-hundredths feet (104.28') to a point, said point being distant Thirty feet (30') measured northerly at right angles from the line between the north and south half of Lot 22:

THENCE North Sixty-eight degrees, Thirty-two minutes, East ( $N68^{\circ}32'E$ ) a distance of Five hundred and Eighty-four and Nine-tenths feet (584.9') to a point said point being distant Thirty feet (30') measured northerly at right angles from the line between the north and south halves of Lot 22:

THENCE North Sixty-eight degrees, East ( $N68^{\circ}00'E$ ) a distance of Four hundred and Fifty-seven and Forty-two one-hundredths feet (497.42') to a point said point being distant Thirty feet (30') measured northerly at right angles from the line between the north and south halves of Lot 22:

THENCE North Sixty-eight degrees, Thirty-five minutes, Thirty seconds, East ( $N68^{\circ}35'30"E$ ) a distance of  
Cont.



D. S. 192

2

EXHIBIT A

Five hundred and Forty-four and Fifty-three one-hundredths feet (544.53') to a point said point being distant Thirty feet (30') measured northerly at right angles from the line between the north and south halves of Lot 22.

THENCE North Sixty-eight degrees, Nineteen minutes, East, ( $N68^{\circ}19'00''E$ ) a distance of Two hundred and Thirty-six and Four-tenths feet (236.4') more or less, to a point in a post and wire fence being the line between Lots 21 and 22, distant Thirty feet (30') measured northerly thereon from the northerly limit of the north half of Lot 22, and said point being also distant Two thousand, One hundred and Forty-three and Five-tenths feet (2143.5') measured southerly thereon from the north-west corner of Lot 21, Concession 9:

THENCE North Sixty-eight degrees, Nineteen minutes, East, ( $N68^{\circ}19'00''E$ ) a distance of One thousand, Five hundred and Thirteen and Eighty-one one-hundredths feet (1513.81') to a point, said point being distant Thirty feet (30') measured northerly at right angles from the line between the north and south halves of Lot 21:

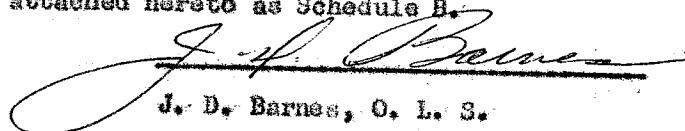
THENCE North Sixty-eight degrees, Five minutes, Thirty seconds, East, ( $N68^{\circ}05'30''E$ ) a distance of Two hundred and Fifty-six and Seven one-hundredths feet (256.07') to a point said point being distant Thirty feet (30') measured northerly at right angles from the line between the north and south halves of Lot 21 and said point also being distant Five and Seven one-hundredths feet (5.07') measured South Sixty-six degrees, Forty-six minutes, West,

Cont.

SCHEDULE A

( $366^{\circ}46'W$ ) a distance of Two hundred and Eighty-nine and Ninety-three one-hundredths feet (289.93') measured South Sixty-eight degrees, Five minutes, Thirty seconds, West ( $368^{\circ}05'30''W$ ) from a point in the easterly limit of Lot 21, distant Two thousand, One hundred and Thirty-eight and Seventy-three one-hundredths feet (2138.73') measured South Twenty-one degrees, Fourteen minutes, Thirty seconds, East ( $321^{\circ}14'30''E$ ) thereon from the north-east corner of Lot 21, Concession 9:

The herein described parcel of land shown outlined in red on a plan of survey, dated the 5th day of September, 1957, in the City of Toronto, certified as correct by J. D. Barnes, Ontario Land Surveyor, is attached hereto as Schedule B.

  
J. D. Barnes, O. L. S.

The estate, right or interest required  
is as per attached definition.

UNION GAS COMPANY OF CANADA, LIMITED

"T. Weir"

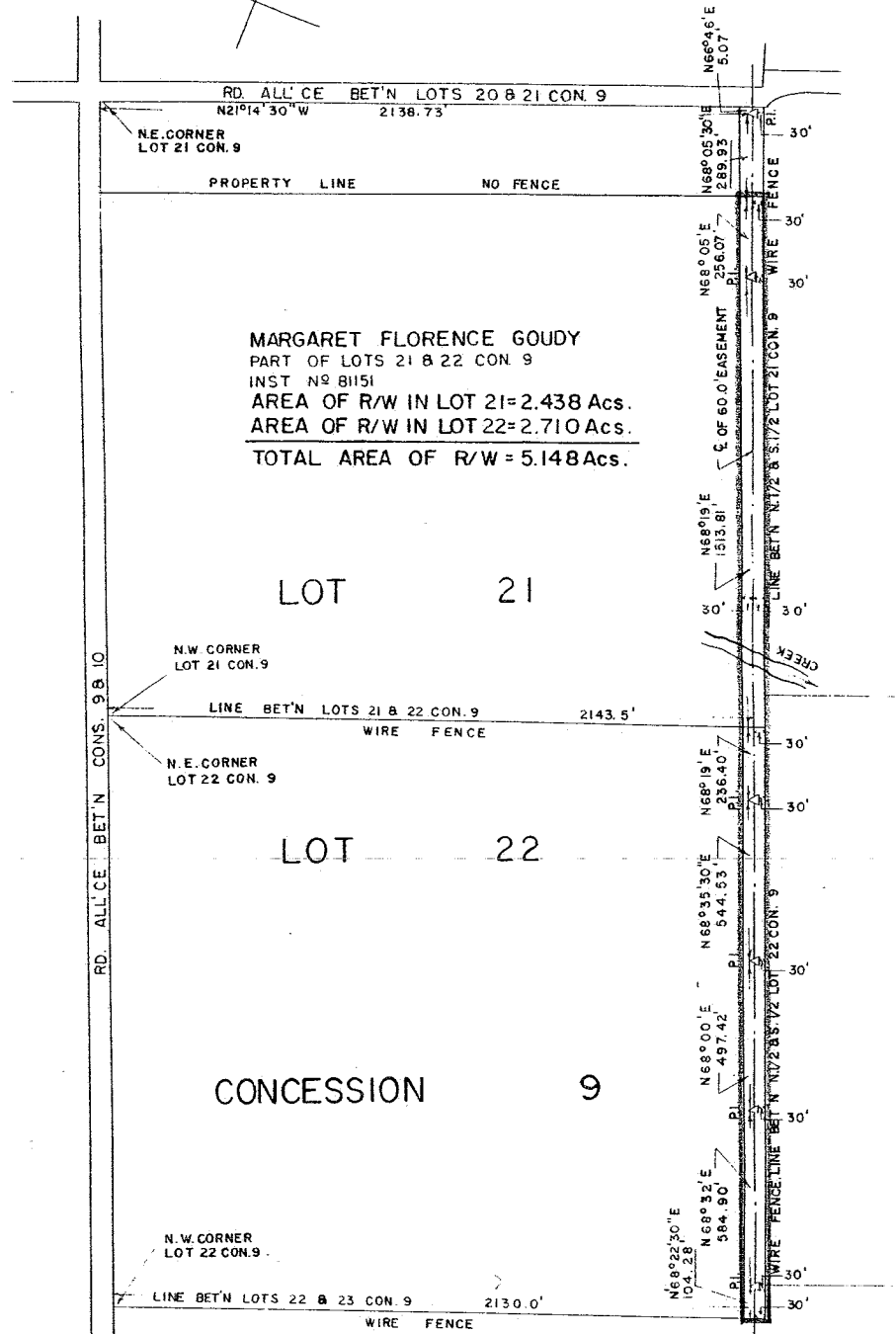
"SEAL"

"J. W. S. McQuat"

Assistant Secretary

PLAN SHOWING  
PART OF LOTS 21 AND 22 CONCESSION 9  
TOWNSHIP OF LONDON  
COUNTY OF MIDDLESEX

SCALE: 1 INCH = 500 FEET



THE ESTATE, RIGHT OR INTEREST REQUIRED IS  
AS PER ATTACHED DEFINITION.

UNION GAS COMPANY  
OF CANADA LIMITED

Vice-President & General Manager  
Assistant Secretary

## NOTE:

BEARINGS HEREON ARE ASTRONOMIC AND ARE REFERRED  
TO THE MERIDIAN THROUGH THE SOUTH-WEST CORNER OF  
LOT 16 CONCESSION 5 TOWNSHIP OF LONDON

DATED: SEPT. 5, 1957  
TORONTO, ONTARIO.

HERBERT L. COONS  
ONTARIO LAND SURVEYOR

## THE ONTARIO ENERGY ACT

R.S.O. 1960, Chapter 122

Notice of Registration of Order Authorizing  
ExpropriationTo Margaret Florence Joudy, . . . 3, 11<sup>th</sup> Street, Ontario.  
.....  
.....  
.....  
.....  
.....  
.....  
.....

TAKE NOTICE that pursuant to Section 13 (4) of The Ontario Energy Act, Ontario Natural Gas Storage and Pipelines Limited did on the 5th day of June, 1961 register as No. 1 in the Registry Office for the County of Chatham, a certified copy of an Order of the Ontario Energy Board dated the 4th day of June, 1961 authorizing the said Company to expropriate the land as set forth in the description and plan and defined in the definition of estate, right or interest required, copies of which are attached to the Notice of Expropriation bearing even date herewith and served upon you herewith pursuant to Section 5 (1) of The Expropriation Procedures Act, 1962-63.

DATED at Chatham, Ontario this 1<sup>st</sup> day of June, 1961.

ONTARIO NATURAL GAS STORAGE AND  
PIPELINES LIMITED

by McNevin, Gee & O'Connor  
McNevin, Gee & O'Connor

its Solicitors herein.

## FORM 1

## The Expropriation Procedures Act, 1962-63

(Section 5 (1) )

## NOTICE OF EXPROPRIATION

To .. Robert Florence Goudy, R.R. #3, Ilderton, Ontario.  
.....  
.....  
(Registered Owner)

## TAKE NOTICE:

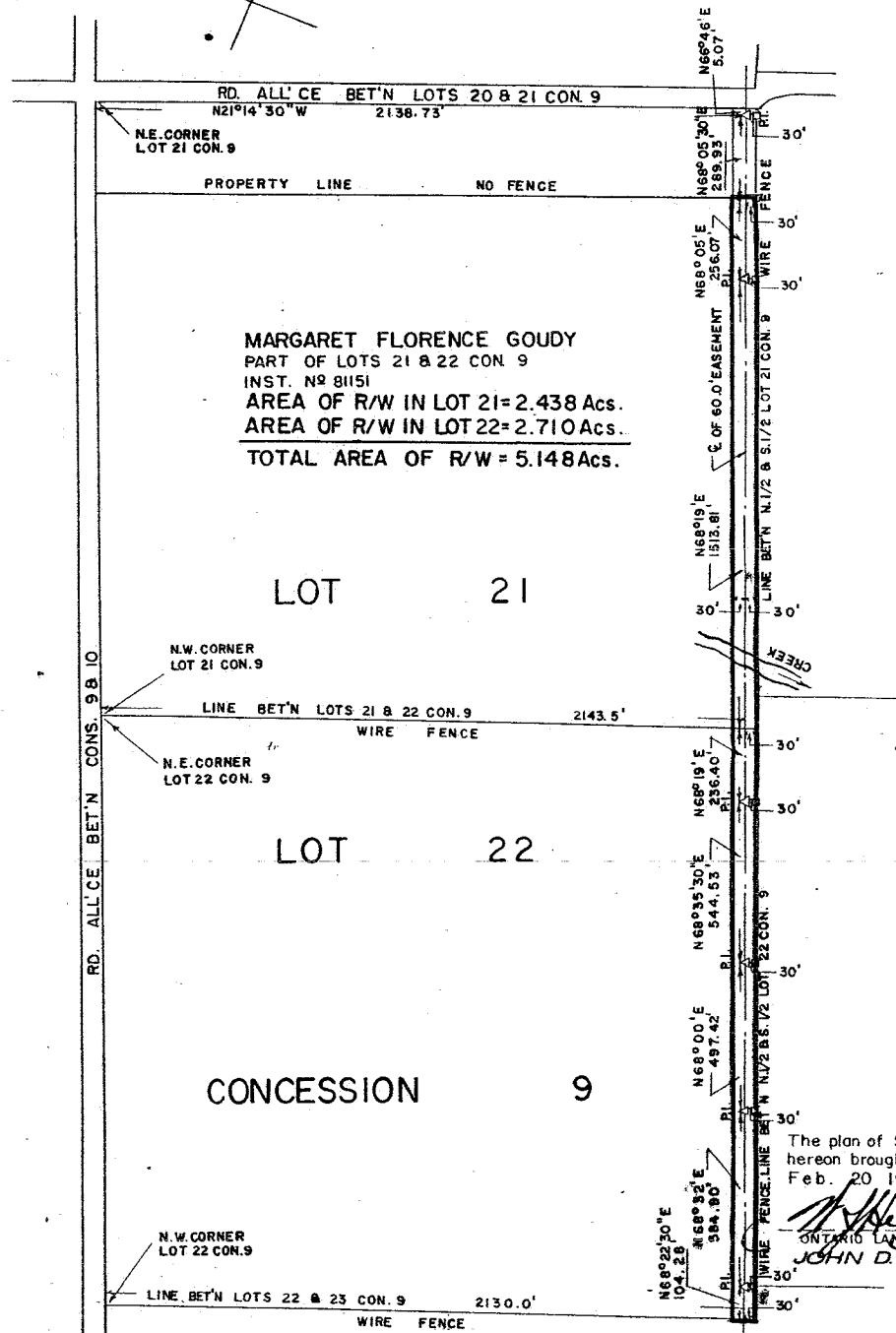
1. That Ontario Natural Gas Storage and Pipelines Limited did, on the 5th day of June, 1964, register as No. 12 887 in the Registry Office for the County of Middlesex ( ) a plan of expropriation in accordance with The Expropriation Procedures Act, 1962-63, and that the land defined therein is vested in Ontario Natural Gas Storage and Pipelines Limited for its use.
2. Attached hereto is a copy of the portion of the plan of expropriation of your land, together with a copy of the description thereof and a copy of the definition of the estate, right or interest required.
3. That, under The Expropriation Procedures Act, 1962-63, Ontario Natural Gas Storage and Pipelines Limited will be notifying you of the amount of compensation it is willing to pay for the land expropriated and the damages resulting therefrom and that, if you are not satisfied with the offer, you are entitled to have the compensation determined by a Board of Arbitration upon your making application to it.
4. That for any further information respecting this matter you may communicate with Ontario Natural Gas Storage and Pipelines Limited at Gas Building, 48 Fifth Street, Chatham, Ontario.

DATED at Chatham, Ontario, this 12th day of June, 1964.

ONTARIO NATURAL GAS STORAGE AND  
PIPELINES LIMITEDby McNevin, Gee & O'Connor  
McNevin, Gee & O'Connor,

its Solicitors and Agent Herein.

SCALE: 1 INCH = 500 FEET



Secretary

DATED : SEPT. 5, 1957  
TORONTO, ONTARIO.

HERBERT L. COONS  
ONTARIO LAND SURVEYOR

" A "

SCHEDULE

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Township of London, in the County of Middlesex, in the Province of Ontario, and being composed of Part of Lots 21 and 22, Concession 9, in the said Township, and which said parcel of land containing by admeasurement five and one hundred and forty-eight one-thousandths acres (5.148 ac.) be the same more or less, and being a strip of land sixty feet (60.0') in perpendicular width, which centre line and centre line produced of the said strip of land is described as follows:

BEARINGS HEREIN are astronomic and are referred to the meridian through the South-West corner of Lot 16, Concession 5, Township of London;

COMMENCING at a point in the interior of Lot 21, Concession 9, said point being in the Westerly limit of the lands as described in Registered Instrument No. 53681, and distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 21, and which said point may be located as follows:

STARTING at the North-East corner of Lot 21, Concession 9;

THENCE South twenty-one degrees, fourteen minutes, thirty seconds East (S21°14'30"E) along the Easterly limit of Lot 21, two thousand, one hundred and thirty-eight and seventy-three one-hundredths feet (2,138.73');

THENCE South sixty-six degrees, forty-six minutes West (S66°46'W) five and seven one-hundredths feet (5.07');

THENCE South sixty-eight degrees, five minutes, thirty seconds West (S68°05'30"W) two hundred and eighty-nine and ninety-three one-hundredths feet (289.93') to the said point of commencement;

THENCE South sixty-eight degrees, five minutes West (S68°05'W) two hundred and fifty-six and seven one-hundredths feet (256.07') to a point distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 21;

THENCE South sixty-eight degrees, nineteen minutes West (S68°19'W) one thousand, five hundred and thirteen and eighty-one one-hundredths feet (1,513.81') to a point in a wire fence being the line between Lots 21 and 22, Concession 9, distant thirty feet (30.0')

measured Northerly at right angles from the line between the North and South halves of Lot 21, said point of intersection also being distant two thousand, one hundred and forty-three and five-tenths feet (2,143.5') measured Southerly thereon from the North-West corner of Lot 21, Concession 9;

THENCE South sixty-eight degrees, nineteen minutes West (S68°19'W) two hundred and thirty-six and forty one-hundredths feet (236.40') to a point distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 22;

THENCE South sixty-eight degrees, thirty-five minutes, thirty seconds West (S68°35'30"W) five hundred and forty-four and fifty-three one-hundredths feet (544.53') to a point distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 22;

THENCE South sixty-eight degrees, zero minutes, West (S68°00'W) four hundred and ninety-seven and forty-two one-hundredths feet (497.42') to a point distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 22;

THENCE South sixty-eight degrees, thirty-two minutes West (S68°32'W) five hundred and eighty-four and ninety one-hundredths feet (584.90') to a point distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 22;

THENCE South sixty-eight degrees, twenty-two minutes, thirty seconds West (S68°22'30"W) one hundred and four and twenty-eight one-hundredths feet (104.28') to the intersection with a wire fence being

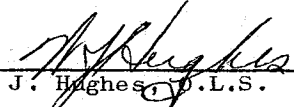


the line between Lots 22 and 23, distant thirty feet (30.0') measured Northerly at right angles from the line between the North and South halves of Lot 22, said point of intersection also being distant two thousand, one hundred and thirty feet (2,130.0') measured Southerly along the line between Lots 22 and 23, from the North-West corner of Lot 22, Concession 9.

The herein described parcel of land bounded on the West by a wire fence being the line between Lots 22 and 23, and on the East by the Westerly limit of the lands as described in Registered Instrument No. 53681, as shown outlined in red on a copy of a Plan of Survey, prepared by Herbert L. Coons, Ontario Land Surveyor, dated September 5th, 1957, brought up to date by John D. Barnes, Ontario Land Surveyors, dated February 20th, 1964, in the City of Toronto, certified as correct by W. J. Hughes, O.L.S., is attached hereto as Schedule B.

April 27, 1964

Certified Correct:

  
W. J. Hughes, O.L.S.

The estate, right or interest required  
is as per attached definition.

ONTARIO NATURAL GAS STORAGE AND PIPELINES LIMITED

\_\_\_\_\_  
President and General Manager

\_\_\_\_\_  
Secretary

DEFINITION OF ESTATE, RIGHT OR  
INTEREST REQUIRED

A right, liberty and easement in perpetuity on, over, along, in, under and through a strip of land sixty feet (60') in perpendicular width as shown within the red border on the attached copy of a plan dated the 20<sup>th</sup> day of February, 1964, signed by W. J. Hughes O.L.S., hereunto attached as Schedule "B" for all or any of the purposes of ingress and egress by Ontario Natural Gas Storage and Pipelines Limited, its successors and assigns, its and their servants, workmen, employees, agents, contractors and subcontractors and those engaged in its and their business, at any time and from time to time either on foot and/or with vehicles, machinery, supplies and equipment and of surveying, laying, constructing, maintaining, inspecting, patrolling, altering, removing, replacing, reconstructing, repairing, moving, keeping, using and operating in, through, along and under such strip of land in such location or locations as the Company may decide, a buried pipeline for the transmission of gas (together with all such buried attachments and equipment and attachments and appliances for cathodic protection which the Company may deem necessary or convenient thereto) including the right along such strip of land to leave exposed any pipeline with its said appurtenances in crossing a ditch, stream, gorge or similar object where approval thereto has been obtained from the appropriate Provincial Authority having jurisdiction in such matters, and, including the right to make temporary openings in any fence or tile drain along or across such strip of land for any of the purposes aforesaid, but expressly excluding the right to fence in all or any part of such strip of land except to restore any fence interfered with; SUBJECT TO THE AFORESAID PURPOSES AND RIGHTS, RESERVING to the landowner from time to time or person or persons entitled thereto, the right to fully use, occupy and enjoy such strip of land except as may be necessary for any of the purposes aforesaid and except (without the prior written consent of the Company) as to any excavating, drilling, installing or erecting therein or thereon of any pit, well, foundation, pavement, building or other structure or installation apart from installing, constructing, repairing, keeping, using and operating lanes, roads, driveways, pathways, walks, farm or domestic tile drains, domestic sewer pipes, domestic water pipes and domestic utility pipes and fences in and on such strip of land without interfering with the said pipeline, provided that prior to commencing any such installation, construction or repair the landowner shall (a) give the Company at least five (5) clear days' notice in writing pointing out the work desired so as to enable the Company to have a representative inspect the site and/or be present at any time or times during the performance of the work, (b) follow the instructions of such representative as to the performance of such work without damage to the said pipeline and, (c) exercise a high degree of care in carrying out any such work.

## Section 8 (1)

[illegible]

1. That Ontario Natural Gas Storage and Pipelines Limited hereby offers to pay to you the sum of .....  
 fifty-three cents----- (\$ 500.03 )  
 in full payment of the compensation for all interests in the land as described and defined in the Notice of Expropriation bearing even date herewith and served upon you herewith.

DATED at Chatham, Ontario this 1<sup>st</sup> day of June,  
1911.

by McNevin, Gee & O'Connor  
McNevin, Gee & O'Connor

its Solicitors and Agent Herein.

## Section 18

To Margaret Florence Goudy, R.R.#3, Elderton, Ontario.

(Registered Owner)

1. That Ontario Natural Gas Storage and Pipelines Limited hereby offers to pay to you the sum of Three hundred Dollars and thirty-two cents (\$300.32 )

being a sum of not less than 50 per cent of the amount estimated by the Company as the compensation for all interests in the land as described and defined in the Notice of Expropriation bearing even date herewith and served upon you herewith, and that such sum, if accepted, shall be applied in partial payment of any compensation that may subsequently be agreed upon or determined.

2. That this notice is given pursuant to Section 18 of The Expropriation Procedures Act, 1962-63.

DATED at Chatham, Ontario, this 12th day of June,  
1964.

ONTARIO NATURAL GAS STORAGE AND  
PIPELINES LIMITED

by McNevin, Gee & O'Connor  
McNevin, Gee & O'Connor,

its Solicitors and Agent Herein.

## Section 19

To Margaret Florence Goudy, No. 3, Clifton, N.J.

(Registered Owner)

1. That on the 24th day of June, 1964, Ontario Natural Gas Storage and Pipelines Limited requires possession of the land as described and defined in the Notice of Expropriation bearing even date herewith and served upon you herewith.
2. That this notice is given pursuant to Section 19 of The Expropriation Procedures Act, 1962-63.

DATED at Chatham, Ontario this 12th day of June, 1964.

by

McNevin, Gee & O'Connor  
McNevin, Gee & O'Connor

its Solicitors and Agent  
Herein.

## **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.

---

**GAPLO-UNION (STRATHROY-LOBO)**

**WRITTEN EVIDENCE OF  
RICK KRAAYENBRINK**

**March 31, 2006**

---

I own and farm properties described as Part of Lot 26, Concession 2 and Part of Lot 26 and Part of the road allowance between Concessions 1 & 2, Registered Plan No. 24, Moore Township, Lambton County, designated as Parts 1 -10, Plan 25R1585 in the Land Registry Office for the Registry Division of Lambton (No. 25).

On my property, there are three existing Union Gas lines running north and south. In addition, there is a Vector line running east and west. There are also three TransCanada lines running east and west. This makes seven lines on the property. From the perspective of potential liability and safety, I am concerned that no landowner would want to buy this property. With the addition of each line, there is a larger percentage of land being damaged. In addition, the development potential of this land is diminished. One cannot construct buildings on top of the pipelines. The more pipelines there are, the less likely it is that industry will be interested in the farm for development. The particular difficulty with the three Union Gas lines is that the railway is due west of the route. Any railway spur to be constructed on the farm to provide access to it would have to go over the three Union pipelines. This would only be feasible if the lines were buried deep enough and if the thickness of the pipe were sufficient. However, the pipelines are not buried deeply enough nor is the thickness of the pipe sufficient to allow for commercial development over top of the line. Commercial development on this property is a likelihood given its location. It is close to industry and it is close to a railway, the St. Clair River and a major highway. In order to develop the property, a railway spur would be a necessity so that industry would have access to the railway. If my land is now industrial land because of multiple pipelines, I should be compensated for industrial land. The same goes for Strathroy -Lobo.

Working the land on this farm properly with three Union lines, one Vector line and three Trans Canada lines has been a challenge. The three Union lines run north-south, the one Vector and three Trans Canada lines run east-west. The Vector and Trans Canada lines cause loss of production because of crossing regulations. We are afraid of crossing the three Union lines with a loaded grain buggy which weighs 60,000 lbs because of the thin walled pipe and the depth of cover. With farm equipment getting larger and heavier pipes in the rural area should be thicker than that in the urban area because of heavy equipment. Are our lives not as valuable as that of the urban people?

I have a 12 inch Union Gas line which I believe was installed in the 1960's. The 24 inch Union Gas line was installed in 1989 and the 20 inch in 2002. I knew the 12 inch line was in the property when we bought it in 1997. However, it was only some time after our purchase that we found out that we had the 24 inch line in production with the gas flowing. In 2001, we discovered that the line was unregistered. We have our own tiling equipment and use it on the farm. The fact that, for a time, we had no idea the line was there, had the potential to kill a number of people. The 20 inch line was the only Union line put in while we owned the land. We reluctantly came to an agreement with Union Gas on that line because a hearing was too expensive and letting them expropriate would mean losing all control. When we signed the agreement with Union we lost most of our control anyways.

With respect to the construction of new Union Gas lines, like that being proposed in Strathroy-Lobo, I am very concerned about soil impacts. I would very much like to see all the soil stripped with a high hoe rather than with a bulldozer. This would mean that there would be less compaction of the subsoil. This would mean that drainage would be better due to there being less compaction. This



method of stripping was used by Vector on my property and on other properties and I saw that this worked very well even though it was an especially wet summer.

In order to ensure that construction methods and procedures are fair to the landowners, I believe that a Joint Committee is necessary. I was a landowner representative on the Vector line when it was installed. The Committee was very important in ensuring that construction was done according to the Letter of Understanding (LOU). Ron Kerr, the other landowner representative, and I met with the Project Manager on a daily basis, and this worked very well. As stated above, the Vector line was installed during one of the wet test summers in history and there were many situations which arose that made it difficult for Vector to abide by the LOU. There were situations where the committee members asked the landowners for their opinion and this was of great assistance in getting the job done. I have found in my dealings with landowners that it is easier to resolve problems with them when it is other landowners who speak to them about problems that arise. With the Joint Committee in place, it was a team effort to get the line in.

The Joint Committee proposed by Union Gas in its current LOU is too restricted. A Joint Committee would not mean that Union would lose control over its construction schedule and procedures. The Committee would be made up of one landowner representative, one Union Gas representative and a neutral third party environmentalist. This structure provides a good balance and means that sometimes a landowner gets his or her way and sometimes the landowner is overruled. This was the setup for the Vector pipeline. I've attached to this statement excerpts from the Vector LOU about the "Construction Liaison Committee" and WSSD.

With respect to the separation distance between subsoil and topsoil during construction, Union must ensure that it uses enough temporary land to keep these soils separate even if it means they must remove trees. Although it is understood by landowners that the trees are in an environmentally sensitive area, it is my position that trees will regenerate in a shorter time than the time it would take to remediate the topsoil if there were to be mixing. I believe that Union Gas has done its calculations for land required by assuming that landowners only want the trench area stripped. From experience, I know that there is not enough room to allow for full easement stripping while maintaining an adequate separation distance between topsoil and subsoil of one metre. The impact of having subsoil and topsoil mixed, even if inadvertently, cannot be overstated. I personally would not want the remediation that Union Gas has indicated as the answer to all the landowners' problems, but would rather have prevention. The soil is our lifeblood. Union could alleviate the potential problems of soil mixing by placing a row of large bales between the topsoil pile and the subsoil pile.

Another issue that I wish to address is pre-construction tiling. Pre-construction tiling is a very important factor in this construction. All low-lying areas require a stone pit so that when there is a large amount of rain, the rain will flow away. The advantage to a stone pit is that it works 24 hours a day. With a stone pit in place, the soil will dry much more quickly and will not saturate which in turn will mean less compaction. Pre-tiling must be done on both sides of the topsoil piles where the tile will not be damaged by construction activities. Installing pre-construction tile will mean there will be a lot less delay for the construction crew as the soil will then dry more quickly. I strongly believe that putting in pre-construction tiling would save Union Gas thousands and perhaps

tens of thousands of dollars on dewatering crews if there is any large rainfall during construction which there may well be given that Union Gas appears to be intending to construct in the fall. Post-construction tiling should then be done on the easement and temporary work area.

During construction, traffic should remain on the trench line. This is an important point as this will eliminate a lot of compaction to the soil that otherwise would result. It will also prevent equipment from crushing existing tile that is in the ground. If this is not avoided, flooding may again become a problem given that crushed tile will not be operating properly. Common sense will allow exceptions to this rule such as if an ambulance has to get down if someone is hurt. In addition, I understand that some workers are expensive and it is cheaper to have them travel on the trench line in a bus to save on travelling time. However, if this is going to be done, the bus should have terra tires on it. When I travel on my own land, I use some of the supply of terra tires that I keep in my shed for exactly that reason. I believe that Union Gas should accord the land the same respect the landowners give it. Pick up trucks on the easement cause a lot of compaction and, therefore, Union Gas should use all-terrain vehicles during construction.

Landowners are also concerned about the proposed depth of cover for this pipeline. I grow and harvest grain. The approximate weight of a loaded grain buggy is five times the weight of a high hoe per square inch. My concern about this is that on a federally regulated pipeline, I am not allowed to drive a high hoe over the line as the high hoe is considered to be too heavy. Although driving a grain buggy over the lines is not an every day occurrence, it is something that sometimes does need to be done. Farmers do not want to be in a position where we are not allowed to drive over the pipelines with our heavy farm equipment.

The average weight of my loaded grain buggy is 23.1 pounds per square inch with the tires on it that I have on it (up to 60,000 pounds). Sugar beet harvesters used in Southwestern Ontario can weigh approximately the same. The average weight of a high hoe, in comparison, I understand to be approximately 4.6 pounds per square inch. I am most concerned that the depth of cover proposed for the Strathroy-Lobo line is insufficient to support the great weights that sometimes are driven over the lines. Landowners are concerned for their safety and that of their families each and every time they must cross one of the lines with heavy machinery. This concern becomes even more of a concern in respect of the older lines and as farm equipment gets heavier and heavier. Landowners also are concerned about not being allowed in the future to travel across these pipelines with their heavy farm equipment.

I also make use of deep tillage equipment such as a disc ripper and para-plough in my farming operations to loosen compacted soil, improving overall drainage and crop yield. Normally, I operate this equipment down to a maximum depth of twenty inches, but deep tillage may go even deeper. Pipelines must be installed deep enough to accommodate modern farming practices safely.

Another issue that needs to be addressed is that of construction vehicles parking on both sides of the road. It is essential that farmers are able to get from one field to the next and in order to do so, they must be able to drive the wide farm machinery down the road. If construction vehicles park on both sides of the road, which I have seen them do on other occasions, farmers are not able to pass by on the road as there is not enough room to get around. I have no objection to there being parking areas at each road crossing on the land with proper construction methods.

After construction, it is vital that the land be restored to its pre -construction grade. In order to ensure that the grade is what it was prior to construction, the use of GPS technology is essential. Returning the land to its original grade is important to ensure that water will flow from any low spots and will either run off the field or into stone pits. If this is not done on this soil, flooding will occur. GPS technology gives topographic readings that can pinpoint the grade no matter what point is picked. This technology is not very expensive and what is gained in accuracy is worth it. Using GPS would ensure that the grade is restored to its pre -construction state and in the long run, I believe it would save Union Gas money by allowing them to avoid flooding problems that would otherwise result from failing to return the land to grade after construction.

I believe that Union Gas must understand that when they construct pipelines, they have a great impact on the soil productivity and fertility. Mitigation, in a lot of cases, is not a sufficient answer to the problems. Prevention of problems at the outset should be the goal. I believe that prevention would be cost-effective for both landowners and Union Gas in the long run.

If Union intends, despite landowners' concerns, to construct during wet weather, it should pay different compensation for working in dry conditions than it does for working in wet conditions. Working in wet soils should be compensated at two or three times the rate for working in dry weather. On my farm, Union's construction crews didn't abide by the WSSD. Wet Soil Shutdown is supposed to be a routine part of "Union's normal management process for pipeline construction activities." On my farm, they had dozers and stringer trucks full of mud. The rolling harrows of the cultivators they used were full of mud. They were para -

ploughing wet soil, which compacted the soil even more instead of reducing it. The para-plough is a dry soil tool.

The eventual abandonment of the pipeline is of great concern to me and all pipeline landowners. As pipelines have aged, we have become, as landowners, very aware of issues resulting from the degradation of the pipe. The abandonment issue must be dealt with in the easement agreement so that there is some certainty for landowners at the outset. If pipes are left in the ground upon abandonment, they could corrode and cause problems with water movement, there could be blow outs and there could very well be environmental problems from the leaching of contaminants that are left in the pipe. Our greatest concern is knowing at the outset who will be responsible for these pipes. It is vitally important that the company accept responsibility up front for abandonment and that there be a fund established for remedial action upon abandonment. In the attached agreement between CN and Union Gas, Union agreed to remove its pipe from the ground on 90 days' notice. Landowners should have that same option.

Liability is also a concern for landowners. As there is no financial benefit to us having a pipeline on the property, it is important to know the exact extent to which we are indemnified by the company. We need to know by whom we are indemnified, whether the indemnification will be effective if the company changes hands and the implications of any trade agreements on our liability. As landowners we do not feel that we should have any liability for these pipelines given that we have not asked that they be installed on our properties.

Union Gas' pipelines have had a significant impact on my life. I still think about the unregistered pipeline which endangered my family. And the process

needs to be changed. It's impossible to negotiate a fair deal with the threat of expropriation hanging over your head. To have even a slim chance to get a fair deal, landowners have to get together, and that takes time and money. In my case, we had to hire a lawyer at our own expense in order to explain our options. The hearing process is expensive, too, and not just in terms of money. Landowners have to devote a lot of time to a pipeline project that isn't theirs.

Union Gas seems to rely heavily on what has been done "historically" in order to justify what is being proposed now in Strathroy-Lobo. I would simply point out that what has been done "historically" has caused many problems for landowners and this should never be the justification for what will be done now or in the future. Times and knowledge have changed and Union Gas should be willing to change with the times. No leave to construct should be granted until Union presents a fair easement agreement, a fair LOU and a fair compensation package. And Union Gas should be responsible for all of the costs incurred by the landowners in dealing with the pipeline including hearing costs, lawyer costs, expert consultant costs, landowner time, etc.

A handwritten signature in cursive script, reading "Rick Kraayenbrink". The signature is written in dark ink and is positioned above the printed name.

Rick Kraayenbrink

March 31, 2006

**Vector Pipeline Project**  
**Landowner Letter of Understanding**  
**May 6, 1999**

CAEPLA-PLC 178

- 20) The Company agrees to make reasonable efforts to locate above ground facilities adjacent to lot lines and public road allowances. The acquisition and rights of first refusal to re-acquire above ground facility lands will be negotiated between individual landowner(s) and the Company.
- 21) The Company agrees that construction equipment used for the purpose of topsoil replacement will not be located off the easement or temporary working space and will be designed to minimize soil compaction and draw the topsoil from the stockpile or windrow onto the easement and temporary work space.
- 22) The Company agrees to instruct its employees and contractors to park vehicles and equipment off the traveled portion and on one side of any road used during construction. Company inspectors will monitor parking during construction to ensure this practice is maintained.

**B. Landowner Relations Program**

- 1) Prior to construction the Company shall undertake interviews with individual landowners to identify and determine any site specific details including the location of water wells, septic systems, existing and planned drain tiles and drain mains, access roads, field access crossing locations and other issues which may be of concern during construction.
- 2) The Company shall notify all landowners of the scheduled start of construction a minimum of 1 week prior to the contractor moving equipment onto the permanent easement and temporary working areas.
- 3) During construction and restoration, the Company agrees to implement a landowner complaint tracking system.
- 4) The Company will also establish a three-member committee, referred to as the Vector Construction Liaison Committee ("VCLC"), that will be used to facilitate the resolution of disputes between landowners and the Company during and following construction that directly result from construction and restoration activities.



**Vector Pipeline Project**  
**Landowner Letter of Understanding**  
**May 6, 1999**

- 5) The VCLC will comprise of the following individuals: (1) the Project Chief Inspector; (2) the Project Environmental Inspector; and (3) a GAPLO-Vector appointed landowner representative. GAPLO-Vector recognizes that its appointed representative shall use all reasonable efforts to be available to address matters pertaining to the VCLC. Upon being appointed, the GAPLO-Vector representative shall notify the Company of the name and the telephone number(s) of one (1) alternate landowner representative who will be contacted by the Company in the event that the appointed landowner representative cannot be contacted or is otherwise unavailable. So as to ensure continuity and expedited resolution of matters concerning the VCLC, the alternate landowner representative shall remain as the VCLC landowner representative for the purposes of addressing the specific matter before the VCLC. Vector shall make reasonable efforts to contact all members of the VCLC, including the alternate VCLC landowner representative if the appointed landowner representative is unavailable, should a committee decision be required. In the event any member of the VCLC can not be contacted or is otherwise unavailable, the issue before the VCLC shall be resolved by the remaining VCLC members.
- 6) 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 VCLC, the Company will consider retaining a mutually satisfactory independent consultant to assist in the resolution of the particular dispute.
- 7) The Company agrees to provide remuneration to the VCLC landowner representative for participation in VCLC proceedings at a rate of \$75 per hour.
- 8) Should an emergency arise during the construction or operation of the pipeline, the Company agrees to notify any affected landowner within 72 hours following emergency access to that landowner's property and provide a written report on how the emergency situation was resolved.

**C. Soil Studies & Testing**

- 1) The Company agrees to carry out pre and post-construction compaction, soil fertility and soybean cyst nematode sampling and testing at locations both on and immediately adjacent to the temporary work space or easement in an undisturbed location.

**Vector Pipeline Project  
Landowner Letter of Understanding  
May 6, 1999**

**SCHEDULE "A"**

**VI. Wet Weather Shut-Down Procedure**

This procedure applies to all pipeline construction projects supervised by Vector. The objective of this procedure is to conserve and protect soil in agricultural areas from long-term damage and consequential crop losses. Movement of heavy construction equipment on the pipeline right-of-way during wet soil conditions may cause excessive compaction and rutting. This procedure is in place to suspend or minimize construction activity during these periods and shall remain in effect over the entire construction and clean-up periods. In some special situations, other wet soil operating procedures may be employed, subject to the approval of the landowner.

- 1) At least 30 minutes before the commencement of construction on days where there is the possibility that wet weather may cause soil damage if construction activities proceed, members of the VCLC will assess the right-of-way soil conditions and determine whether right-of-way conditions are too wet such that soil damage would result if construction were to proceed.
- 2) In the event a majority of the VCLC determines that soil damage would result if construction were to proceed that day, the Chief Inspector will immediately notify the Project Manager and the Pipeline Contractor of such determination. The Chief Inspector will further ensure that the Pipeline Contractor has promptly ceased all of the affected construction activity.
- 3) It is recognized that a majority of the VCLC may determine that certain activities can continue without causing soil damage. This may include restricting movement on the right-of-way to wide tracked equipment, bored crossings, welding etc.
- 4) If rain commences after construction has started, the VCLC will closely monitor right of way soil conditions. In the event a majority of the VCLC determines that construction should be stopped, the Chief Inspector will immediately notify the Project Manager and the Pipeline Contractor of such determination. The Chief Inspector will further ensure that the Pipeline Contractor has promptly ceased all of the affected construction activity.

PERMISSION is hereby given by CN TRANSACTIONS INC. (hereinafter called the "CN") to UNION GAS LIMITED (hereinafter called the "Licensee") to enter upon for all purposes relating to the construction and thereafter the use and maintenance of a 24" pipeline for the conveyance of gas, (hereinafter referred to as the "pipeline") along the Right of Way of the Railway in the Township of Moore, County of Lambton and Province of Ontario, in the location identified as Parts 3, 6 and 8 on Registered Reference Plan No. 25R-5094, attached as Schedule "A" hereto and to use and occupy Parts 1, 4, 5 and 7 shown on the said plan for access to parts 3, 6 and 8 during the period of construction, and for continued access and the storage of construction materials for a period of one year after the completion of construction. SUCH PERMISSION IS GIVEN SUBJECT TO THE FOLLOWING TERMS AND CONDITIONS:

THE LICENSEE AGREES:

1. At its own risk and expense, to use and maintain the pipeline to the satisfaction of CN and in compliance with all orders, rules and regulations of the National Transportation Agency or other authority of competent jurisdiction now or hereafter in force applicable thereto.
2. Before commencing any major repairs or renewals of the service pipelines, to give to the local Superintending Officer of CN at least seventy-two (72) hours' prior notice in writing to enable the CN to send an Inspector to supervise the said work and to pay the wages of the said Inspector including his expenses while so engaged, on demand from CN.
3. Not at any time to obstruct CN's tracks nor to interfere, in any way, with the usefulness or safety for railway purposes of the CN's tracks and lands. Should CN at any time or from time to time desire to construct other tracks under the service pipelines or to make any alterations to its existing tracks, at its own risk and expense to perform any work of strengthening, rebuilding or altering the pipeline as may be required by CN.
4. To indemnify and save harmless CN from all loss and expense incurred by CN and from and against all claims and demands, loss, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted (and the Licensee hereby waives as against CN all claims or whatsoever nature or kind) in any manner arising by reason of the constructions, existence, maintenance or use of the pipeline, save and except to the extent that any action, suit, claim, demand, direct loss, costs, damages and expenses arises from the gross negligent acts or omissions of the Licensee, its employees and agents.

Received Time: Mar. 26. r. 8:32 PM

3. All persons entering upon the premises of CN for any purpose connected with this License shall do so at the CAERLA-PLC 182 of the Licensee and CN shall not be liable for any injury, loss or damage howsoever caused to such persons while on the said premises and to indemnify CN against all claims that may be made by reason of any such injury, loss or damage, save and except to the extent that any such injury, direct loss or damage arises from the gross negligent acts or omissions of CN, its servants, employees and agents.

- 2 -

6. To pay to CN, for the privileges herein granted, the sum of TWO THOUSAND AND SEVENTY THREE DOLLARS (\$2,073.00) per annum, payable in advance on the First day of June, in each year during the first five years hereof, the first of such payments to become due and payable on the First day of June, One Thousand Nine Hundred and Eighty-nine.

PROVIDED that the license fee payable hereunder shall be subject to review at the end of the fifth and at the end of each successive five years during the continuance hereof and set at a rate which, in the opinion of CN, is fair and equitable and shall be payable in like manner.

7. The pipeline and facilities and all appurtenances thereof while on CN premises shall at all times be at the risk of the Licensee in respect of loss or damage from whatsoever cause arising, whether due to the negligence of CN, its employees or otherwise.

8. Not to assign or sublicense this License nor any right or privilege hereunder without the consent in writing of CN.

AND MUTUALLY AGREE:

9. This License shall be in effect from the First day of June, One Thousand Nine Hundred and Eight-Nine until terminated by either party hereto on giving to the other party not less than Ninety (90) days' written notice. Such notice may be given by addressing same to the Licensee at 50 Keil Drive N., Chatham, Ontario, N7M 5M1, and to CN addressing same to its Regional Manager, Real Estate Services, Suite 920, 277 Front Street West, Toronto, Ontario, M5V 2X4.

10. Upon the termination of this License in any manner, the Licensee shall forthwith, at its own risk and expense, remove the service pipelines from the premises of the Railway and restore the said premises affected by such removal to a condition satisfactory to CN. Should the Licensee default in so doing, CN may perform the said work or removal at the risk and expense of the Licensee.

DATED at Toronto, Ontario, as of the First day of June, One Thousand, Nine Hundred and Eighty-Nine.

Witness:

CN TRANSACTIONS INC.

*G. J. Bester*

*R. C. MacArthur*

Received Time Mar. 26: 8:32PM

Regional Manager

EB-2014-0261

**ONTARIO ENERGY BOARD**

**IN THE MATTER OF** the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, and in particular, S.36 thereof;

**AND 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** the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, and in particular, S.91 thereof;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders for approval of recovery of the cost consequences of all facilities associated with the development of the proposed Lobo C Compressor/Hamilton-Milton Pipeline project;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the City of Hamilton, City of Burlington, and the Town of Milton, and leave to construct a compressor and ancillary facilities in the Municipality of Middlesex Centre.

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**GAPLO WRITTEN EVIDENCE STATEMENT****January 9, 2015**

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1. The Gas Pipeline Landowners of Ontario ("GAPLO") is a voluntary organization of landowners directly affected by Union Gas Limited ("Union") pipelines and associated facilities. GAPLO has approximately 120 active members across Ontario including Karen Hewitt, a landowner whose lands are directly affected by the proposed Hamilton to Milton NPS 48 Pipeline.
2. As set out in GAPLO's intervention request letter, GAPLO and its members have an interest in ensuring that Union's construction methodologies and environmental protection measures are held to the highest standards by the Board. GAPLO and its members also have

an interest in ensuring that the form of landowner agreement to be approved by the Board pursuant to Section 97 of the *Ontario Energy Board Act* satisfactorily addresses, *inter alia*, the accommodation of farming practices and issues related to pipeline abandonment.

3. In reviewing Union's application for the Hamilton to Milton NPS 48 Pipeline Project, GAPLO was disappointed to see that Union is proposing to step back from important improvements that were made previously to its form of easement agreement and to its construction methodology, initially in connection with the Strathroy to Lobo NPS 48 Pipeline (EB-2005-0550)<sup>1</sup>.

4. GAPLO's intervention in this proceeding is focused on re-establishing those important improvements for the current project and beyond. The reasons behind the changes made by Union for the Strathroy to Lobo NPS 48 Pipeline remain valid in the present context, and Hamilton to Milton landowners (whether members of GAPLO or not) deserve the same treatment by Union and the Board.

### **EASEMENT AGREEMENT**

5. For the current project, Union has reverted to the form of easement agreement that was used immediately prior to the Strathroy to Lobo NPS 48 Pipeline Project<sup>2</sup>. That form of agreement omits two important changes that were agreed upon by Union and GAPLO and accepted by the Board in its Section 97 decision in EB-2005-0550<sup>3</sup>:

- a. The replacement in Clause 1 of the phrase "*Transferor and Transferee hereby agree that nothing herein shall oblige Transferee to remove the Pipeline from the Lands as part of Transferee's obligation to restore the Lands*" with "*As part of the Transferee's obligation to restore the Lands upon surrender of its easement, the Transferee*

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<sup>1</sup> EB-2005-0550, Decision and Order dated June 12, 2006; EB-2005-0550 Settlement Agreement between GAPLO-Union (Strathroy-Lobo) and Union Gas Limited dated May 9, 2006 (see **Attachment 1**); Transcript of EB-2005-0550 Receipt of Settlement Proposal, May 9, 2006 (see **Attachment 2**).

<sup>2</sup> Union Pre-filed Evidence, Exhibit "A", Tab 13, Schedule 3

<sup>3</sup> EB-2005-0550, Decision and Order dated June 12, 2006, page 9; Union Form of Easement for Strathroy to Lobo NPS 48 Pipeline (see **Attachment 3**); This form of easement agreement was also proposed by Union and approved by the Board in connection with the NPS 36 Pipeline in EB-2007-0633 (see excerpt from Union Pre-filed Evidence at **Attachment 4**); EB-2007-0633, Decision and Order dated October 19, 2007, page 7.

- 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. This provision shall apply with respect to all Pipelines in the Dawn-Trafalgar system on the Transferor's Lands.";* and,
- b. The addition of the following language at the end of Clause 3: *"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."*

6. Of the two omissions from the form of easement agreement proposed by Union in this proceeding, the omission of the additional abandonment language is of primary concern to pipeline landowners. Given that Ontario has virtually no requirements in place for pipeline abandonment, Union's proposed language is designed to have the effect of avoiding any removal of abandoned pipelines in the future regardless of landowner preference.

7. In response to GAPLO's interrogatories related to pipeline abandonment, Union suggested the following:



- a. *“Union does not anticipate the need to ever abandon this line. However, when abandoning pipelines, Union complies with all applicable codes and regulations”<sup>4</sup>;*
- b. *“There should be no adverse effects if the pipeline is decommissioned and abandoned in compliance with legislation, regulations, codes and guidelines”<sup>5</sup>; and,*
- c. *“No. Union will not agree to amend the provisions of the easement. Union will comply with any applicable TSSA requirements with respect to abandonment of pipelines.”<sup>6</sup>*

8. Union does not provide any support for its suggestion that compliance with legislation, regulations, codes and guidelines will mean that there will be no adverse effects from pipeline abandonment in place. Possible adverse effects such as ground subsidence/collapse, residual contamination and the creation of water conduits are well known to pipeline companies and landowners<sup>7</sup>.

9. Union also does not provide details of the currently applicable legislation, regulations, codes and guidelines, including applicable TSSA (Technical Standards and Safety Authority) requirements. As noted above, Ontario has virtually nothing in place to deal with the abandonment of pipelines, leaving pipeline companies more or less free to choose their own preferred methods of abandonment. The TSSA has published a “Pipeline Abandonment Checklist” that is nothing but a series of questions for pipeline companies<sup>8</sup>.

10. Ontario legislation does require compliance by pipeline companies with the CSA Standard Z662-11, but that standard provides only three brief sub-sections on pipeline abandonment<sup>9</sup>. Decisions about how a pipeline is to be abandoned (in place or removed) are

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<sup>4</sup> Union Response to GAPLO IR 1.16(a).

<sup>5</sup> Union Response to GAPLO IR 1.16(b).

<sup>6</sup> Union Response to GAPLO IR 1.16(f),(g) and (h).

<sup>7</sup> See, for example, National Energy Board Pipeline Abandonment Physical Issues Committee – Key Abandonment Issues Summary (**Attachment 5**) and Det Norske Veritas Pipeline Abandonment Scoping Study prepared for the National Energy Board (**Attachment 6**). Of note, both of these documents were created after the completion of the EB-2005-0550 proceeding.

<sup>8</sup> TSSA Pipeline Abandonment Checklist (see **Attachment 7**).

<sup>9</sup> CSA Z662-11, Section 10.16.

left entirely to the pipeline company, and there is no requirement for public participation or even landowner participation in the pipeline abandonment process.

11. While Union did not address pipeline abandonment in its current application, Union's Environmental Management Manual included as part of the Environmental Assessment for the 2006 Hamilton to Milton NPS 48 Pipeline did state that, "Abandonment plans will be developed after consulting with regulatory authorities, and receipt of approvals where necessary. All environmental and socioeconomic issues associated with abandonment or decommissioning options will be considered."<sup>10</sup>

12. Again, Union's plans for future pipeline abandonment as disclosed in 2006 do not include landowner involvement in the decision-making process, or even landowner consultation. Also, GAPLO is aware of no current requirements in Ontario for approvals for pipeline abandonment.

13. In the absence of a regulatory regime for pipeline abandonment in Ontario, Union's proposed easement agreement abandonment language is designed to prevent pipeline removal on abandonment. Landowners deserve to have the option of pipeline removal on abandonment, and the language in the easement agreement to be approved by the Board in this proceeding should reflect that.

14. The other omission from Union's easement agreement of concern to GAPLO and its members is Union's retraction of its commitment to make reasonable efforts at its own expense to accommodate changes in land use adjacent to the pipeline easement. The proximity of the Hamilton to Milton pipeline route to the 401 Highway and to large urbanized centres makes this commitment even more important in the present context than it was in the Strathroy to Lobo context.

15. At least as far back as 1991, Union has been made aware by landowners of the development potential of properties along the Hamilton to Milton section. In the Environmental

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<sup>10</sup> Union Response to GAPLO IR 1.22, Attachment 1, 2006 EA, Section 4.12, Adobe Page 339.

Assessment prepared in April, 1991 for the Hamilton to Milton section, Acres International Limited reported that: “Nine landowners stressed that the pipeline would affect the immediate development potential of their land and it would subsequently lose its value. A further nine landowners thought that their land had subdivision potential sometime in the future.”<sup>11</sup>

16. The Board should protect a landowner’s ability to develop the lands along the Hamilton to Milton Pipeline corridor in the future by requiring Union to restore its commitment to facilitating future changes in land use in the form of easement agreement.

### **INDEPENDENT CONSTRUCTION MONITOR**

17. In the area of pipeline construction methodology, Union has taken a major step backwards from the Strathroy to Lobo NPS 48 Pipeline by refusing to agree to the appointment of an Independent Construction Monitor (“CMT”).<sup>12</sup> Union appears to imply that, as no significant issues with Union’s construction practices were identified by the CMT in the Strathroy to Lobo NPS 48 Pipeline construction (according to Union), there would be no need to have a CMT in place for future constructions.

18. Union’s position fails to acknowledge that the CMT position was established for past pipeline constructions in order to address a history of problems faced by landowners, failures by contractors to follow proper construction procedures, and damage to the environment.<sup>13</sup> An absence of significant issues during the construction of the Strathroy to Lobo NPS 48 Pipeline is not an indication of the absence of a need for the CMT position; it is an indication of the important role played by the CMT in ensuring that Union’s contractors performed appropriately.

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<sup>11</sup> Union Response to GAPLO IR 1.22, Attachment 1, 1991 EA, Adobe Page 453.

<sup>12</sup> Union Response to GAPLO IR 1.5.

<sup>13</sup> EB-2005-0550 Written Evidence of Ian Goudy (see **Attachment 8**); EB-2005-0550 Written Evidence of Rick Kraayenbrink (see **Attachment 9**).

19. This is actually reflected in Union's statement to the Board in its May 11, 2009 letter that, "the primary role that [the CMT] was to undertake during construction of the Strathroy Lobo pipeline was that of a compliance monitor."<sup>14</sup>

20. Also, it should be noted that the weather and soil conditions for the construction of the Strathroy to Lobo NPS 48 Pipeline were close to ideal, with the result that the potential for construction problems was reduced. The Strathroy to Lobo CMT noted in its report that: "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."<sup>15</sup>

21. However, the CMT also noted: "Under these near ideal construction conditions, it was also clear to the CMT that at least seven (15%) of landowners were not satisfied with the standard procedure 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."<sup>16</sup>

22. The CMT position is important to ensure proper execution of construction methodology by Union's contractors, especially where affected landowners do not have extensive knowledge of pipeline construction. In its final report, the Strathroy to Lobo CMT made a number of recommendations about landowner education, to which Union responded with the following: "Union understands that these recommendations result from discussions between the Monitor and various parties regarding construction practices including the options that a landowner has regarding construction on their properties and concerns regarding their understanding of the

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<sup>14</sup> Union Response to GAPLO IR 1.5, Attachment 1.

<sup>15</sup> Cordner Science Final Report dated December 18, 2008, page 16 (see report excerpt at [Attachment 10](#)).

<sup>16</sup> Cordner Science, *supra* at page 16.

options available to them. These recommendations are most likely as a result of the above noted Communications recommendations in that Cordner is likely not aware and did not participate in any of the pre-construction negotiations between Union and the various landowner negotiating committees (GAPLO-Strathroy/Lobo and Bartlett Group) during which these matters were discussed. As well Union has suggested to landowners that if they have any questions regarding any of the terms of the Letter of Understanding or construction practices that they should seek the advice of GAPLO or other experts that are available to them. Union does not believe that Cordner knows or understands the knowledge of construction practices that GAPLO has developed.”<sup>17</sup>

23. The involvement of an independent construction monitor in the proposed Hamilton to Milton NPS 48 Pipeline construction will be all the more important because GAPLO does not have a significant presence along the affected pipeline route<sup>18</sup>. Union does not appear to have provided for any landowner representation in the oversight of construction for the current project. For the Strathroy to Lobo NPS 48 Pipeline construction, Alan Wood acted as landowner representative on behalf of GAPLO and its members.

24. Union has also not included as part of its current project application a copy of any Letter of Understanding to be used with landowners. Union and GAPLO agreed upon the form of Letter of Understanding to be used for the Strathroy to Lobo NPS 48 Pipeline construction<sup>19</sup>, which included provision for the independent construction monitor, and GAPLO is proposing that the same form of Letter of Understanding be made a requirement of approval by the Board of the Hamilton to Milton NPS 48 Pipeline project.

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<sup>17</sup> Union Response to GAPLO IR 1.5, Attachment 1.

<sup>18</sup> Union does confirm, though, that the Integrity Dig Agreement as endorsed by Union and GAPLO (see **Attachment 11**) applies to the land along the Hamilton to Milton section (see Union Response to GAPLO IR 1.30(c)).

<sup>19</sup> Letter of Understanding for Landowners on the Proposed NPS 48 Strathroy-Lobo Project (see **Attachment 12**); This form of Letter of Understanding was also used by Union in connection with the NPS 36 Pipeline in EB-2007-0633 (see excerpt from Union Pre-filed Evidence at Attachment 4 above).

### **CUMULATIVE EFFECTS ASSESSMENT**

25. Union's decision to step back from previous commitments about pipeline abandonment, facilitation of future development of lands, and the use of an independent construction monitor during pipeline construction, indicates a choice to ignore the historical reasons behind the advancements in construction and landowner relations that Union has made over several decades.

26. The cumulative effects assessment undertaken by Stantec Consulting Ltd. ("Stantec") on behalf of Union also reflects this choice. Stantec did not include consideration of the adjacent Union pipelines and pipeline easements in its analysis of cumulative effects of the proposed project, in spite of clear direction to do so in the *OEB Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario*.<sup>20</sup>

27. In response to one of GAPLO's interrogatories related to the cumulative effects assessment, Union states that: "No landowner concerns have been addressed regarding soil damage or crop loss from any previous pipeline construction activities in the Hamilton to Milton pipeline corridor. Considering that the oldest of the three existing pipelines was constructed nearly 60 years ago, Union would expect negligible, if any, residual soil damage or crop loss."<sup>21</sup>

28. However, Union has been made aware of these cumulative effects of its past construction projects. In the Environmental Assessment prepared in April, 1991 for the Hamilton to Milton Corridor, Acres International Limited cited major concerns raised by affected landowners:

- a. "Six landowners reported changes in grade or some effect on drainage such that they now have wet areas where the land does not dry out as quickly in the spring";
- b. "Six landowners reported some adverse effects on crops, including lower yields and not growing specialty crops over the pipeline easement";

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<sup>20</sup> *OEB Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario*, 6<sup>th</sup> Edition 2011, pages 44 et ff.

<sup>21</sup> Union Response to GAPLO IR 1.28(d).

- c. “Poor separation of topsoil was discussed by 3 landowners”;
- d. “Increased stoniness was mentioned by 2 landowners”; and,
- e. “Two landowners were upset with activities of the construction crew”.<sup>22</sup>

29. In 2006, Stantec prepared an Environmental Assessment for the Hamilton to Milton section and noted the following cumulative effects resulting from an expanding pipeline corridor:

- a. “Soil compaction/structure concerns, leading to reduced crop yields, as similar areas are reworked during repetitive construction activities (e.g., the work area for the 1<sup>st</sup> line is often used as the spoil area for the next line). Historically, when the 1957 pipeline was installed, little or no restoration work was carried out after pipe installation. However, construction practices have vastly improved since then (including wet soils shut-down policy, top soil stripping and clean-up practices) and crop reduction has been lessened (ESG, 1998)”;
- b. “Increase in the easement widths can place limitations on the options for which the land can be used (e.g., loss of building potential)”;
- c. “Ongoing inconvenience to landowners during construction activities by successive pipeline installation and their maintenance”; and,
- d. “Fragmentation/nibbling of woodlots such that the size is reduced to such an extent it has little ecological importance and often there is a loss of the linkage between natural areas.”<sup>23</sup>

30. Although Union’s Soil/Crop Monitoring Program has not included the Hamilton to Milton section specifically<sup>24</sup>, crop yield loss of up to 40% has been identified by Union in locations along the nearby Milton to Parkway NPS 48 section<sup>25</sup>. No data was provided for crop yields over the pipelines constructed by Union Gas prior to the 1970s before Union had implemented

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<sup>22</sup> Union Response to GAPLO IR 1.22, Attachment 1, 1991 EA, Adobe Page 452.

<sup>23</sup> Union Response to GAPLO IR 1.22, Attachment 1, 2006 EA, Section 6.1, Adobe Page 131.

<sup>24</sup> Union Response to GAPLO IR 1.28(f).

<sup>25</sup> *Pipeline Construction and Impacts on Agricultural Lands: A Historical Review of the Union Gas Soil/Crop Monitoring Program*, ESG International, July, 1998, Table 4, Adobe Page 18 (see **Attachment 13**).

any of the improvements to construction practices cited in its interrogatory response to GAPLO<sup>26</sup>.

31. As a condition of approval of the current project, Union should be required to complete a cumulative effects assessment that includes consideration of the adjacent pipelines (including residual soil damage and crop yield loss) and the overall impact of the further expansion of the Hamilton to Milton corridor, including the effect that multiple pipelines within the corridor will have on future abandonment activities.

#### **DEPTH OF COVER MONITORING PROGRAM**

32. Union has advised GAPLO that it is, “in the process of preparing a Standard Operating Practice for depth of cover and will file this document in confidence with the Board once complete.”<sup>27</sup> GAPLO is requesting that the Board make it a condition of approval of the current project that Union prepare the Standard Operating Practice for depth of cover and that it be provided to GAPLO and all landowners along the Hamilton to Milton section.

33. It is GAPLO’s understanding that a written procedure to address depth of cover has been a regulatory requirement in Ontario since as early as 2008<sup>28</sup>, and Union has suggested no rationale for maintaining confidentiality over its proposed Standard Operating Practice. Landowners have a direct and immediate interest in knowing how Union monitors depth of cover over its pipelines and how it will remedy specific situations of insufficient depth of cover.

#### **PROPOSED CONDITIONS OF APPROVAL**

34. To summarize, GAPLO will be requesting that the Board impose the following as conditions of approval of the Hamilton to Milton NPS 48 Pipeline:

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<sup>26</sup> Union Response to GAPLO IR 1.28(f).

<sup>27</sup> Union Response to GAPLO IR 1.2(a).

<sup>28</sup> TSSA Oil and Gas Pipeline Systems Code Adoption Document FS-121-08 dated January 14, 2008 (see **Attachment 14**); TSSA Oil and Gas Pipeline Systems Code Adoption Document Amendment FS-196-12 dated November 1, 2012 (see **Attachment 15**).



- a. That the form of agreement that Union has offered or will offer to affected landowners will be the form of easement agreement approved by the Board in EB-2005-0550; and,
  - b. That Union will use the Letter of Understanding filed by Union with the Board in EB-2005-0550 for the current project, including provision for the appointment of an independent construction monitor for the construction.
35. GAPLO has also identified two steps that the Board should require Union to take immediately and prior to any further consideration by the Board of Union's application:
- a. Union should be required to complete and file in this proceeding a cumulative effects assessment that includes consideration of the adjacent pipelines (including residual soil damage and crop yield loss) and the overall impact of the further expansion of the Hamilton to Milton corridor, including the effect that multiple pipelines within the corridor will have on future abandonment activities; and,
  - b. Union should be required to prepare and file in this proceeding its proposed Standard Operating Practice for depth of cover.
36. This written evidence statement was prepared under the direction of Ian Goudy, Rick Kraayenbrink and Alan Wood.

January 9, 2015



# ONTARIO ENERGY BOARD

**FILE NO.:** EB-2014-0261

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**VOLUME:** 1

**DATE:** March 5, 2015

<b>BEFORE:</b>	Marika Hare	Presiding Member
	Ellen Fry	Member

EB-2014-0261

**THE ONTARIO ENERGY BOARD**

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 pipelines 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 recovery of the cost consequences of all facilities associated with the development of natural gas pipelines and ancillary facilities and the compressor station.

Hearing held at 2300 Yonge Street,  
25<sup>th</sup> Floor, Toronto, Ontario,  
on Thursday, March 5<sup>th</sup>, 2015,  
commencing at 9:38 a.m.

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VOLUME 1  
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BEFORE:

MARIKA HARE  
ELLEN FRY

Presiding Member  
Member

A P P E A R A N C E S

LJUBA DJURDJEVIC	Board Counsel
ZORA CRNOJACKI	Board Staff
PASCALE DUGUAY	
CRAWFORD SMITH	Union Gas Limited
KAREN HOCKIN	
MARK KITCHEN	
MARK MURRAY	
JOHN GOUDY	Gas Pipeline Landowners of Ontario (GAPLO)
MARK RUBENSTEIN	School Energy Coalition (SEC)
VIA TELECONFERENCE:	
JOANNA KYRIAZIS	Association of Power Producers of Ontario (APPrO)
EMMA BLANCHARD	Canadian Manufacturers & Exporters (CME)

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1 Thursday, March 5, 2015

2 --- Upon commencing at 9:38 a.m.

3 MS. HARE: Please be seated.

4 Good morning. My name is Marika Hare, and I will be  
5 the presiding member today in the matter of an application  
6 brought by Union Gas. With me on the panel is Board Member  
7 Ellen Fry.

8 The application brought by Union Gas sought approval  
9 for approval to construct approximately 20 kilometres of  
10 pipeline and associated facilities from the Hamilton valve  
11 site to the Milton valve site, leave to construct a new  
12 compressor and associated facilities at the existing Lobo  
13 compressor station, the recovery of the cost consequences  
14 of all facilities associated with the development of the  
15 proposed Dawn-Parkway expansion project, and approval of an  
16 accounting order to establish the Dawn-Parkway expansion  
17 project deferral account, which will include all of the  
18 facilities associated with the pipeline and compressor  
19 station.

20 This application was assigned docket number EB-2014-  
21 0261. Following a settlement conference between the  
22 applicant and a number of parties, a settlement agreement  
23 was filed with the OEB on February 27th, 2015. This is a  
24 partial settlement, in that, of the 11 issues on the Issues  
25 List, eight have been completely settled and three remain  
26 unsettled.

27 The purpose of today's hearing is for this Panel to  
28 review the settlement agreement and to hear the matters not



1 settled, all of which relate to land matters. It is our  
2 understanding that the only party with an interest in  
3 pursuing these issues is the Gas Pipeline Landowners of  
4 Ontario.

5 May I have appearances, please?

6 **APPEARANCES:**

7 MR. SMITH: Good morning, members of the Board. My  
8 name is Crawford Smith. I appear as counsel for Union Gas  
9 in this matter. And with me to my left are Karen Hockin  
10 and Mark Kitchen from Union Gas, and to my right Mark  
11 Murray, also from Union Gas.

12 MS. HARE: Thank you.

13 MR. JOHN GOUDY: John Goudy, counsel for the Gas  
14 Pipeline Landowners of Ontario, GAPLO.

15 And also here from GAPLO are Ian Goudy and Rick  
16 Kraayenbrink.

17 MS. HARE: Thank you.

18 MR. JOHN GOUDY: Thank you.

19 MR. RUBENSTEIN: Good morning, Panel. Mark  
20 Rubenstein, counsel for the School Energy Coalition.

21 MS. DJURDJEVIC: Good morning, Ljuba Djurdjevic,  
22 counsel for Board Staff, and with me on behalf of Board  
23 Staff are Zora Crnojacki and Pascale Duguay.

24 MS. HARE: Thank you.

25 And I understand there are some people on the  
26 telephone, on the teleconference?

27 MS. BLANCHARD: Good morning, Madam Chair. It's Emma  
28 Blanchard on behalf of Canadian Manufacturers & Exporters.

1 MS. HARE: Thank you, Ms. Blanchard.

2 Anyone else? Yes?

3 MS. KYRIAZIS: Hi, I am Joanna Kyriazis. I am here on  
4 behalf of APPrO.

5 MS. HARE: APPrO? Thank you.

6 Then Ms. Blanchard will -- Ms. Djurdjevic, will Ms.  
7 Blanchard be able to send an e-mail to you in the event she  
8 has any questions?

9 MS. DJURDJEVIC: Yes, she will.

10 MS. HARE: Thank you.

11 Mr. Smith, then, the Panel would like to provide you a  
12 short overview -- we'd like you to provide us a short  
13 overview of the settled issues, and the settled issues we  
14 would like to hear first, but -- well, you look like you  
15 want to say something.

16 MR. SMITH: I can't help it. That is always what I  
17 look like. Why don't I let you finish, and then I will  
18 maybe --

19 MS. HARE: Thank you. So first I would like to let  
20 you know that the Panel found the settlement agreement to  
21 be lacking in content in some important matters. It is not  
22 a standalone document that is understandable without the  
23 benefit of going back into the evidence, so more content  
24 would have been helpful.

25 Now, as it turns out, the Board Staff's submission  
26 does provide the detail that was missing on three issues  
27 where we felt there was a lack of sufficient explanation,  
28 and I will go through each of these with you.

1           The settlement agreement on Issue No. 2, dealing with  
2   the project economics, is incomplete, as the indication is  
3   that the project is at a profitability index of 0.39. The  
4   Staff's submission explains in detail that there are three  
5   stages of analysis, and that when the stage 3 analysis is  
6   considered, the project showed a positive net present  
7   value.

8           Issue No. 3 in the Board Staff's submission provides  
9   additional information on the issue of short-term and long-  
10   term rates, and in particular the concern over contingency  
11   costs and capacity turnback.

12          Issue No. 10 in the Board Staff's submission provides  
13   greater clarity on the caveat about parties being able to  
14   take any position with respect to the adjustment to the  
15   deferral account balance.

16          And lastly, Issue No. 5 in the settlement agreement  
17   requires some additional wording. I don't think there is a  
18   problem there, but the issue as worded is whether the  
19   facilities appropriately address the OEB environmental  
20   guidelines for hydrocarbon pipelines, but the settlement  
21   agreement only comments on the commitment to undertake a  
22   post-construction comparative crop yield study.

23          So I bring these matters to your attention so that  
24   your overview of the settlement agreement can incorporate  
25   Union's thoughts on these matters. If consistent with the  
26   Board Staff's submission, please state this for the  
27   completeness of the record or elaborate to ensure our  
28   understanding of what is being proposed.

1           So I ask you now to present the settlement agreement  
2 with those comments in mind.

3           MR. SMITH: I will do that. Thank you very much.  
4 That is extremely helpful to receive that guidance from the  
5 Board.

6           The only observation I was going to make is I know  
7 from the hearing plan that the next item is to identify  
8 those issues which remain outstanding, and I think, subject  
9 to the Board's thoughts, that the easiest way to do that  
10 might be, as we go through the settlement agreement, I can  
11 just highlight them and we can circle back with those if  
12 necessary.

13           But why don't I go through the settlement agreement as  
14 you have proposed and touch on the points that you have  
15 raised?

16           MS. HARE: Thank you.

17           **SUBMISSIONS BY MR. SMITH:**

18           MR. SMITH: So the settlement agreement, as indicated  
19 by the Board at the outset, it is a partial settlement and  
20 properly characterized as such, but on the non-GAPLO-  
21 related issues it is, I think, fairly characterized as a  
22 complete or full settlement, and even on the GAPLO issues,  
23 as we will come to, those issues which are outstanding,  
24 even in respect of those we have a partial -- a partial  
25 settlement.

26           So the project as identified is an expansion project  
27 of Union's Dawn-Parkway system, and it involved really two  
28 major types of facilities, 20 kilometres of pipeline and

1 changes to the Lobo station, the addition of a 44,500-  
2 horsepower compressor, and some changes that needed to be  
3 made to the Lobo A and B compressors in order to maximize  
4 the capacity bringing -- that is facilitated by this  
5 expansion project.

6 By way of overview, the project is being driven by  
7 demands that have been contracted for, M12 demands, and are  
8 really the result of changes to the natural gas market in  
9 North America, which the Board will be well familiar with  
10 from its recent Natural Gas Market Review and also from  
11 previous Union Gas applications dating back to the  
12 Brantford-Kirkwall project and the Parkway D project that  
13 the Board heard, I guess, now a couple of years ago.

14 So really what we are talking about is an expansion  
15 project intended to meet contracted demands and which are  
16 facilitating access to short-haul transportation coming  
17 from primarily Marcellus shale in the upper northeast  
18 United States. And so that is the context and the dynamic  
19 and the reason why this project is so important, and it is  
20 part and parcel of a series of projects that the Board has  
21 been hearing a lot about from Union and, frankly, that the  
22 NEB is hearing -- has heard a lot about out in Calgary.

23 So let me just go through the settlement agreement.

24 Item 1 here, no issue, I think, at all. The  
25 facilities are needed to meet the forecasted demands, which  
26 are reflected in the application, so I don't think that  
27 there is any issue with respect to that issue.

28 Item 2, which relates to the economic tests as

1 outlined in the filing guidelines, and this was an issue  
2 that the Board had identified, and you are quite right. I  
3 thought you might raise this issue when you saw this  
4 settlement agreement.

5 Let me cut to it; we agree with the Board Staff's  
6 submission. I think it was helpful in pointing out what I  
7 would have pointed out, which is the stage 1 analysis  
8 results in the profitability index that you see. But of  
9 course the economic guidelines also contemplate stages 2  
10 and 3, and those stages are detailed in the evidence and  
11 they arrive at the conclusions that Board Staff has set  
12 out.

13 One reason you see the stage 1 analysis where it is,  
14 one obvious reason, the profitability or the NPV of the  
15 project is calculated based upon existing rates looking at  
16 depreciated facilities. So you have existing rates which  
17 are based upon the existing Dawn-Parkway system, which, in  
18 the main, is now older and depreciated.

19 What you have here is a new rate which will come about  
20 as a result of the inclusion of these new facilities, and  
21 an increase in those rates. And the ratepayers who bear  
22 primary responsibility for those increases -- i.e. the M12  
23 shippers -- have agreed to the rate increases.

24 So I think that provides you with the additional  
25 information. If not, no doubt you will let me know. But  
26 we agree with Board Staff's submission.

27 This brings me to the next issue, which is Issue 3,  
28 and I have talked about the rate impacts already. There

1 are rates for M12 shippers which are going up, and there  
2 are some rate decreases because of the way the cost  
3 allocation works out on the other side for smaller-volume  
4 customers.

5 Let me say, with respect to the items that are  
6 addressed here, there are two things.

7 The first is contingency. The contingency that you  
8 see associated with the application is a little bit larger  
9 than you see in some other Union projects; in fact, I think  
10 every other Union project.

11 The reason for that increase is because this project  
12 requires approval from the Niagara Escarpment Commission,  
13 which is obviously an unknown. We believe it is going to  
14 happen, but it is an unknown and it is an additional hurdle  
15 that doesn't come up in most applications. And so that  
16 reflects the larger contingency.

17 Ultimately, where the parties landed on this is that  
18 they would reduce the contingency by 25 million, which  
19 results in a reduction in rates. But there is, as the  
20 Board will have seen, a deferral account contemplated by  
21 the application.

22 There is nothing exceptional about that deferral  
23 account. The settlement agreement that overarches Union's  
24 IRM framework provides for a capital pass-through  
25 mechanism, and deferral accounts to track over- and under-  
26 spending, which of course itself would be subject to a  
27 prudence review.

28 So what the parties have agreed to here is that,

1 consistent with the deferral account, that will reduce the  
2 contingency by the \$25 million. It will be spread out  
3 between Lobo and the pipeline costs.

4 Parties are free to take whatever position they want  
5 to take when that deferral account comes to clearing. I  
6 obviously don't know what that number is going to be, but  
7 it is all without prejudice to people's position as to the  
8 prudence of the way in which Union undertook the project.

9 MS. HARE: So can you confirm that the reduction  
10 represents a return to what a norm would be for contingency  
11 percentage of a project?

12 MR. SMITH: There isn't a single level of contingency,  
13 so it's not -- it's not quite as direct as saying a 25  
14 percent reduction takes you to this level of contingency  
15 and this level of contingency is consistent across all  
16 Union projects.

17 What I can say is that the reduction of contingency  
18 brings you within the range of other Union projects. I  
19 don't have the specific percentage off the top of my head,  
20 but it would be -- they are not all the same, but it would  
21 be in that normal range.

22 MS. HARE: Okay. Thank you.

23 MR. SMITH: Let me just turn to capacity, because the  
24 capacity turnback was an issue. There was some evidence  
25 filed on behalf of certain of the intervenors relating to  
26 capacity turnback.

27 Obviously, one of the things that is happening as a  
28 result of the changing dynamics is that people are using



1 the Dawn-Parkway system and Dawn-Kirkwall loops a little  
2 bit differently than they may have in the past. There is  
3 identified in Mr. Rosenkranz's evidence and in the evidence  
4 from ICF that Union filed affirmatively in its case,  
5 comments with respect to capacity turnback and the  
6 potential. In a nutshell, there is a disagreement, or was  
7 identified in the evidence a potential disagreement with  
8 respect to the risk associated with potential capacity  
9 turnback.

10 Now, this is a tricky issue because the parties also  
11 have in place the Parkway delivery obligation settlement,  
12 and you might recall that there is an obligation to deliver  
13 gas to Parkway and the parties reached a comprehensive  
14 settlement approved by the Board to, over time, reduce that  
15 commitment if -- in part, if turnback becomes available, or  
16 it may be that other ways need to be found to reduce that  
17 obligation.

18 So there are a number of moving parts here. The long  
19 and the short of it was that parties are comfortable, as  
20 reflected in the settlement, that whatever the risk is,  
21 it's not going to materialize during the IRM term.

22 And so there is going to be a rebasing in 2019. The  
23 proceeding will probably be a bit before that, but Union is  
24 going to have to rebase in 2019 and this is -- we will all  
25 have a better view, presumably, of where this is headed at  
26 that time.

27 And this is all to protect intervenors and anybody  
28 else, including Union, with respect to the position they

1 may want to take as to how to manage that turnback risk.  
2 And there are proposals in Mr. Rosenkranz's evidence, I'm  
3 sure, that will evolve and Union may take a position down  
4 the road. But that is what that is intended to deal with.

5 Item number 4, this is an issue of facilities. There  
6 were a number of facilities and non-facilities alternatives  
7 discussed at some length in Union's prefiled evidence, and  
8 those have been adequately addressed.

9 Let me turn to item number 5. Here, again, we agree  
10 with the Board Staff's submission. So I don't think I have  
11 anything to add. It may have been -- and I obviously  
12 accept full responsibility for this -- that this is drafted  
13 too narrowly, because this really zeroes in on a GAPLO  
14 issue, and it zeroes in on the issue of crop yield and the  
15 impact of the project on crop yield over time. And so  
16 Union has agreed to undertake a post-construction  
17 crop yield study.

18 And then the next issue is here we have a complete  
19 settlement on it, but it is -- sorry, when I say the next  
20 issue -- the next sentence is the letter of understanding.  
21 Union has agreed to offer the letter of understanding that  
22 is attached to the settlement agreement to all affected  
23 landowners.

24 You will hear about this in evidence, but the letter  
25 of understanding deals with a number of things, but it  
26 deals with, essentially, Union's construction practices in  
27 the field, and it deals also with the issue of  
28 compensation.

1        Now, compensation is not an issue for the Board in  
2        these matters; unlike storage, it is not an issue for the  
3        Board in transmission projects. But the letter of  
4        understanding does deal with that.

5        Let me turn to item 6. This is an item on which you are  
6        going to be hearing evidence today. There is no issue with  
7        respect to the pipeline route itself. The issue relates to  
8        construction -- essentially to construction matters, and  
9        let me just summarize it this way.

10        As I understand it, in GAPLO's evidence it raises a  
11        number of issues with respect to construction. One of the  
12        things that it had sought was the appointment of an  
13        independent construction monitor, and it is that issue that  
14        is, in fact, fully settled.

15        So Union has agreed -- the parties have agreed to the  
16        appointment of an independent construction monitor, and the  
17        parameters of that appointment are specified in paragraph -  
18        - or in Issue 6. There will be other things you hear today  
19        about other construction practices, whether they fit into  
20        the letter of understanding or otherwise, which are not in  
21        agreement, and that is what you are going to hear about.

22        Item 7, the form of easement agreement offered by  
23        Union, or that will be offered, this is a partial  
24        settlement, and the wording here is a little bit inelegant,  
25        so let me just help you.

26        There is a form of agreement that is a form of  
27        easement agreement that is attached or included in Union's  
28        prefiled evidence. My understanding is there is no concern

1 with respect to that form of easement, with two exceptions,  
2 one of which I believe has been resolved. So the first  
3 issue was relating to a future use, what would happen in  
4 the event there is a change in the future use of the  
5 property adjacent to the pipeline easement, which can have  
6 an impact on the classification, amongst other things, of  
7 the pipeline. And so you see in the settlement agreement  
8 under item 7 that we have been able to work out specific  
9 wording to address that issue.

10 Where we had no luck is on the issue of pipeline  
11 abandonment, so the question of what happens down the road  
12 in the event of pipeline abandonment. And that is an issue  
13 that you are going to be hearing issue and argument about.  
14 So that is what is captured in item 7.

15 MS. HARE: Okay. Thank you. But let me ask a  
16 question.

17 MR. SMITH: Yes.

18 MS. HARE: In the text that you provided that you say  
19 is settled, can you explain what is meant by the phrase:

20 "... provided that the Transferee may leave the  
21 Pipeline exposed in crossing a ditch, stream,  
22 gorge or similar object where approval has been  
23 obtained from the Ontario Energy Board or other  
24 Provincial Board or authority having jurisdiction  
25 in the premises."

26 Can you please explain for us what that means?

27 MR. SMITH: I will give you the example of where this  
28 could arise. I mean, it may be that the pipeline has to

1 cross a ditch or a gully or some other water-crossing area,  
2 and it would be the case in that instance that you would  
3 need, for example, approval from the Niagara Escarpment  
4 Commission for that exposure. And so the parties are  
5 recognizing that if that, it turns out, is necessary, that  
6 it is acceptable to the landowner provided the requisite  
7 approval is obtained.

8 It is -- I think it is fair to say it is reflected  
9 here in the future use agreement, but it is -- in effect,  
10 it may not be driven by future use, necessarily. It could  
11 simply be that that routing is necessary, and it could be  
12 that there is a ditch that needs to be crossed, and the  
13 parties are recognizing that that is okay, providing you  
14 get the requisite approval to do that.

15 MS. HARE: But I don't understand. The pipeline will  
16 be exposed permanently? Or if there is some other work  
17 contemplated, say, five years from now?

18 MR. SMITH: It could be permanent.

19 MS. HARE: And so what is the reference to the Ontario  
20 Energy Board approval? In approving the route at this  
21 point, I don't know which parts are exposed or not, so what  
22 exactly am I being asked to approve?

23 So let me ask another question before you answer the  
24 first.

25 MR. SMITH: Sorry. Sorry, yes.

26 MS. HARE: Which is: The standard is for the pipeline  
27 to be underground with a certain amount of cover?

28 MR. SMITH: Yes, yes.

1 MS. HARE: At whose request is this, that in a ditch  
2 or crossing, whatever, it would be exposed?

3 MR. SMITH: It would be the Minister of Transportation  
4 or the Niagara Escarpment Commission in this case.

5 MS. HARE: Has that happened before?

6 MR. SMITH: No. I see -- it appears that there have  
7 been instances where Union has attached the pipe to the  
8 underside of a bridge crossing a gully --

9 MS. HARE: Yes, I understand that, so is that what is  
10 meant by this?

11 MR. SMITH: Yes. And that has happened, and approval  
12 from the MTO has had to have been obtained, and that  
13 approval has been obtained. So that is what is  
14 contemplated here.

15 MS. HARE: Okay. Thank you.

16 MS. FRY: Just to follow on, so can you just follow  
17 that thought along and explain, if that were to occur, sort  
18 of how would you contemplate the process of seeking  
19 whatever type of approval from the Ontario Energy Board?

20 MR. SMITH: Let me answer the question this way. It  
21 is not envisioned that approval of that would be either  
22 necessary or sought from the Ontario Energy Board. The  
23 Board, when it grants leave to construct, generally  
24 approves the route, but this specific -- this specific  
25 approval to attach it to a bridge or leave it exposed is  
26 not something that we are asking this Board to approve, and  
27 I don't think -- thus it is not contemplated that we would  
28 be coming back to the Board for that.

1           So I think it may be a good question that I think  
2   about whether or not the words "Ontario Energy Board,"  
3   which have historically been included in this clause,  
4   really ought to be there, and I don't --

5           MS. FRY: Is that something --

6           MR. SMITH: -- have the answer to that. I might I  
7   need --

8           MS. FRY: -- is that something that --

9           MR. SMITH: -- a couple minutes to think about --

10          MS. FRY: -- you can think about and get back to us  
11   later?

12          MR. SMITH: Yes. Yeah. Just -- and this is a clause  
13   that has found itself in previous agreements, but I think  
14   you have identified a good point.

15          MS. HARE: Okay. Thank you.

16          MR. SMITH: Item 8, here again we have a complete  
17   settlement. There isn't an issue with respect to the  
18   current technical and -- current technical and safety  
19   requirements, and there is again a further reference to  
20   offering the letter of understanding attached to the  
21   settlement agreement.

22          MS. HARE: Well, that actually confused me a bit,  
23   because that is the same agreement that in Issue 6 has  
24   clearly not been accepted, and here -- you know, maybe if I  
25   had looked at the words a bit longer, but the implication  
26   is that that is in agreement. Maybe it should say that it  
27   -- maybe it should say something that it is the sections of  
28   appendix 4 that deal with the technical and safety

1 requirements that are not in dispute.

2 MR. SMITH: It could say that. I think that the focus  
3 here is that Union will offer, at a minimum, the Hamilton-  
4 to-Milton letter of understanding. So I think what we are  
5 -- today there is no dispute that, at a minimum, we are  
6 going to offer what has been appended.

7 What we are going to have a dispute about is should  
8 that letter of understanding include additional items. So  
9 there is no proposal to take anything out.

10 MS. HARE: Okay. Thank you.

11 MR. SMITH: Adequate consultation with other  
12 potentially affected parties, everyone is in agreement that  
13 there has been adequate consultation.

14 Item 10, the parties agree that this meets the IRM  
15 capital pass-through mechanism. And as I was reflecting on  
16 this, there is one other item I just wanted to draw  
17 specifically to your attention.

18 It is not in dispute, but the application seeks  
19 approval of the deferral account that I have mentioned  
20 already. There is no specific paragraph in the settlement  
21 agreement that says the parties agree to the establishment  
22 of the deferral account. What it says instead is that the  
23 parties agree that the deferral account will capture the  
24 over/under-spending identified.

25 I just wanted to draw to your attention that that will  
26 be an item that we will be seeking Board approval in  
27 relation to.

28 MS. HARE: Okay. Thank you.



1 MR. SMITH: And then item 11, here we have a partial  
2 settlement, and so we have the parties acknowledging the  
3 condition of approval in appendix E of the Board's Decision  
4 and Order regarding the Brantford-Kirkwall pipeline. So  
5 that is unaffected by this settlement.

6 MS. HARE: Yes, but I didn't understand what that  
7 paragraph meant.

8 MR. SMITH: Well, my understanding of the intention of  
9 the paragraph is the following. The Brantford-Kirkwall  
10 condition of approval -- that condition of approval in  
11 relation to the Brantford-Kirkwall project is, in a  
12 nutshell, that Union will not commence construction of that  
13 project until the NEB has done a number of things, and  
14 TransCanada has given notice to Union that it intends to  
15 proceed with the Kings North project.

16 I think parties wanted, for greater certainty,  
17 confirmation that this project going ahead and receiving  
18 approval from this Board would in no way impact that prior  
19 condition of approval.

20 If it's of assistance, I don't think it does, because  
21 the prior condition of approval is a standalone condition  
22 and a standalone Board decision, but --

23 MS. HARE: Well, that was my confusion, because I am  
24 familiar with that condition and I couldn't see the  
25 relevance of it here. But maybe the wording isn't clear.  
26 It assumes a level of understanding --

27 MR. SMITH: Okay. We can spell it out further -- or  
28 if Mr. Rubenstein wants to say something about it. It

1 wasn't his proposal, but it was full belt-and-suspenders,  
2 and I don't even think appropriate in the circumstances,  
3 necessarily, because you did have the prior condition of  
4 approval which was very explicit about what is going to  
5 happen and when in relation to Kings North.

6 I mean, it was specifically -- well, it may be that  
7 APPrO wants to speak to this if the Board has any questions  
8 in relation to it -- or, alternatively, since we are going  
9 to be thinking about the other item at the break, I can  
10 have an offline discussion and see whether either this is  
11 necessary or, if it's necessary, we can put in just some  
12 additional wording the way I have articulated, so that it  
13 is perfectly clear what is intended.

14 MS. HARE: Okay. Thank you.

15 MR. RUBENSTEIN: If I can just add one thing, I think  
16 it is important that this section be read in conjunction  
17 with the wording with respect to Issue 10.

18 My understanding was because a similar condition was  
19 not put in place with respect to the Vaughan loop, some  
20 parties wanted to ensure that just -- while the fact that  
21 there is no explicit condition that construction cannot  
22 start before those downstream facilities come into effect  
23 with respect to this project, that this wouldn't affect the  
24 conditions that were put in place in the Brantford-Kirkwall  
25 with respect to the Kings North project.

26 MS. FRY: One other question on the conditions of  
27 approval. You are talking about the standard conditions of  
28 approval.

1           Now, in the IR responses, there was an indication that  
2   at that point, Union was seeking an extra year to start  
3   construction beyond what would normally be standard.

4           I just want to clarify. Does the settlement of Issue  
5   11 mean that Union is no longer seeking the extra year?

6           MR. SMITH: No, it is the opposite. We are still  
7   seeking the extra year, and we understand that parties  
8   don't have any objection to that.

9           MS. FRY: Okay, but it's not included in the  
10   settlement?

11          MR. SMITH: No, we will have to reflect that.

12          MS. FRY: Well, you know, if it is in effect an  
13   addition to the settlement, obviously the Board would want  
14   confirmation that all the other parties to the settlement  
15   agree to that.

16          MR. SMITH: For sure.

17          MS. HARE: Thank you. Does that conclude your  
18   presentation of the settled issues?

19          MR. SMITH: Only if it is of assistance to identify  
20   for the Board that there is this reference back to the  
21   GAPLO issues in Issues 6 and 7. I think I touched on those  
22   already, but I think this will be of assistance.

23          The GAPLO issues can be dealt with, I think, in one of  
24   two ways -- and Mr. Goudy will obviously speak to this if  
25   he disagrees. But I think they can be dealt with in one of  
26   two ways.

27          Possibility one is as a condition of approval.  
28   Possibility two is by inclusion in the letter of

1 understanding.

2 And it doesn't much matter which way you go, but the  
3 reason why I draw this to your attention is -- and this was  
4 addressed when Union put in a letter at the time the Board  
5 was settling the Issues List.

6 The Board has previously addressed the issue of  
7 approving a form of letter of understanding, and the  
8 inclusion of that on the Issues List. And the Board  
9 declined to do so because the letter of understanding  
10 addresses compensation in part, and that is not an area in  
11 which the Board has jurisdiction as it relates to  
12 transmission facilities.

13 So that is why I say it is -- we are not trying to  
14 raise any technical impediment, but it is important to  
15 understand that the letter of understanding deals with  
16 things the Board squarely has within its jurisdiction, i.e.  
17 construction and some other things that are dealt with in  
18 the statute differently.

19 So that is why I say you could either deal with this  
20 by -- if you were to agree with Mr. Goudy, as conditions of  
21 approval, or you could deal with it and just make it  
22 explicit in your Decision that you were incorporating them  
23 into the letter of understanding, you know, as those  
24 matters relate to non-compensation issues.

25 MS. FRY: So that is helpful essentially as a preview  
26 of what you are going to cover in your closing argument  
27 when all the parties are -- I assume.

28 MR. SMITH: Yes. I mean, I don't think Mr. Goudy is

1 going to be saying -- as I understand the issues that are  
2 going to be in dispute, I don't think Mr. Goudy is going to  
3 be saying: Here are some compensation-related issues I  
4 would like you to approve. And indeed, his correspondence  
5 says exactly the opposite; he says we are not addressing  
6 compensation-related issues.

7 It just technically comes to your approval. Do you  
8 want to put -- if you were to agree with him, and we are  
9 obviously going to suggest you shouldn't. But if you were  
10 to agree with him, you could either put it as a condition  
11 of approval, which is -- you can attach it as a condition  
12 of approval, or you can say explicitly you are going to be  
13 offering the letter of understanding and you should include  
14 it in the letter of understanding, bearing in mind that our  
15 decision as it relates to the letter of understanding does  
16 not address compensation-related matters.

17 MS. FRY: We do appreciate the preview. But obviously  
18 you will want to deal with this fulsomely, as will the  
19 other counsel, in closing argument.

20 MR. SMITH: Yes, yes.

21 MS. HARE: Just give us a minute, please.

22 So on the issue of the matters being raised by GAPLO,  
23 we would like to hear the substance of the issues and we  
24 will hear, then, argument about whether or not any of those  
25 will be handled through conditions of approval or the  
26 letter of understanding in final argument.

27 So what we want to concentrate on today is what is the  
28 issue that is being raised, so things like why -- why does

1 Union object. That is what we want to talk about, and we  
2 will then determine whether or not it will be captured  
3 through conditions or the letter of understanding.

4 MR. SMITH: Absolutely. Do you want me to deal with  
5 that now or -- because I think that was what was going to  
6 be the subject of the oral evidence and my friend's cross-  
7 examination and then argument. But I can tell you, if this  
8 is helpful, so that you know where this is headed, that  
9 there are -- I would characterize them as falling into two  
10 buckets.

11 Bucket number one is abandonment, and that is the one  
12 issue, what is going to happen on abandonment should the  
13 Board say something about that today.

14 And then the bucket number two is Mr. Goudy circulated  
15 -- and I am sure he will be marking this as an exhibit --  
16 yesterday or the day before a table that compares certain  
17 sections of the Hamilton-to-Milton letter of understanding  
18 on the left-hand side and then has on the right-hand side -  
19 - it is up on the screen -- has on the right-hand side  
20 "proposed changes."

21 So what you are going to be hearing today is the  
22 existing letter of understanding and the proposed changes  
23 that Mr. Goudy's clients would like. And then obviously we  
24 will deal with the -- I can tell you our position now or we  
25 can go through the evidentiary portion and then have  
26 argument about why Union objects. So I am in your hands  
27 how you'd like me to do it.

28 But in terms of identifying what I expect you are

1 going to be hearing and what the issues are in dispute, the  
2 issues in dispute are abandonment and the specific clauses  
3 that GAPLO would like included in the letter of  
4 understanding.

5 MS. HARE: Right, but what we wanted to do today was  
6 not focus on the wording but on the issue of soybean  
7 nematodes, why is that an issue, why is Union not agreeing  
8 to it, the issue of well water testing results being  
9 available or not, and then we will figure out where it is  
10 placed.

11 MR. SMITH: I agree entirely. I don't think this is a  
12 forum, nor do I think it is a productive use of your time,  
13 to be going through a drafting exercise, and that is not  
14 what is intended. Union's position is that the letter of  
15 understanding -- and you are going to hear evidence of this  
16 -- Union's position is the letter of understanding, which  
17 is the same letter of understanding that was offered to all  
18 28 landowners and accepted by all of them except for Mr.  
19 Fagundes -- who was ultimately expropriated, as the Board  
20 will be familiar. And that letter of understanding that we  
21 are proposing in this case is the letter of understanding  
22 that they offered most recently in Brantford-Kirkwall and  
23 was accepted.

24 As to why the specific changes have not been approved,  
25 it is safe to say -- and I will be calling this evidence --  
26 I anticipate you will be hearing that the letter of  
27 understanding is the result of many years of -- it started  
28 -- it started decades ago. It was a very short document,

1 and it was sort of a: Here is how we are going to deal  
2 with landowners. And it developed over time through  
3 settlements and agreements and what have you, and it became  
4 essentially an unworkable document, not particularly  
5 intelligible, not user-friendly, that didn't reflect --  
6 from Union's perspective, anyway -- its existing  
7 construction practices and best industry practices.

8 It went back to the drawing board, created the letter  
9 of understanding that ultimately it offered in the first  
10 Brantford-Kirkwall project, and that is what it would like  
11 to use going forward.

12 Now, the Board has said in other cases when it comes  
13 to form -- approving the form of agreement it is -- all you  
14 are doing is approving the form of agreement, and specific  
15 negotiation may take place down the road. And nobody is  
16 saying that isn't going to happen, but when it comes to the  
17 form of agreement we think, from a drafting perspective and  
18 a substantive perspective, this is the best form of  
19 agreement.

20 And I expect my friend is going to ask questions about  
21 soybean nematodes, and we have a witness panel who can  
22 speak directly to that issue much more effectively than I  
23 can. That is for sure.

24 So I have confirmed with my friend that he intends to  
25 put the sections to the witnesses, and they are -- they  
26 will give you their answer as to why we think it is not  
27 appropriate, and obviously you will ultimately make a  
28 decision on that.



1 But it is not a drafting exercise. We hope it is a  
2 substantive exercise. We hope we have a substantive  
3 position for you.

4 MS. HARE: Okay. Thank you.

5 Okay. I would like to hear comments from other  
6 parties on the settlement agreement, then. Let's leave  
7 GAPLO to last.

8 Mr. Rubenstein, any comments?

9 MR. RUBENSTEIN: No additional comments to what Mr.  
10 Smith --

11 MS. HARE: Ms. Kyriazis?

12 MS. KYRIAZIS: I don't have any additional comments  
13 either.

14 MS. HARE: Thank you.

15 Ms. Blanchard, on the telephone?

16 MS. BLANCHARD: None, thank you, Madam Chair.

17 MS. HARE: Thank you. Board Staff?

18 MS. DJURDJEVIC: Board Staff is satisfied with the  
19 responses given by the applicant in respect of these  
20 submissions that were made in Board Staff's submission.

21 MS. HARE: Okay. Thank you.

22 Mr. Goudy?

23 **SUBMISSIONS BY MR. JOHN GOUDY:**

24 MR. JOHN GOUDY: Thank you.

25 On Issue 5, Madam Chair, that is the issue dealing  
26 with the environmental guidelines for hydrocarbon  
27 pipelines. So as set out in GAPLO's written evidence,  
28 there was a specific concern raised by GAPLO about whether

1 or not Union had satisfied the environmental guidelines.  
2 So GAPLO has agreed with Union to resolve that specific  
3 concern on the basis of the changes that are set out in the  
4 settlement agreement.

5 GAPLO doesn't take any position with respect to  
6 whether Union has otherwise satisfied the environmental  
7 guidelines. That is for the Board to determine, and GAPLO  
8 doesn't take any position on that.

9 On Issue 8 -- I think this follows on from the  
10 discussion that you just had with my friend -- GAPLO is  
11 proposing specific, substantive changes. The changes are  
12 proposed to the letter of understanding, but -- and this  
13 will be dealt with in argument, but it could be done  
14 through the letter of understanding or it could be done  
15 through conditions of approval.

16 They are construction methodology items that are  
17 within the Board's jurisdiction, and GAPLO is requesting  
18 specific items to be required of Union Gas.

19 So Issue 8 deals with -- again, it was a specific  
20 aspect of the technical and safety requirements. I believe  
21 -- I believe it was depth of cover. Union agreed that it  
22 would offer to the landowners the entire letter of  
23 understanding that is proposed, at a minimum.

24 For the purpose of this issue, GAPLO was interested in  
25 particular in only certain items of the letter of  
26 understanding. GAPLO wanted assurance that Union would be  
27 offering certain provisions dealing with depth of coverage  
28 to the landowners, and Union has agreed to that.

1           So it is the case that for this particular issue  
2   GAPLO's concern was with specific parts of the letter of  
3   understanding, but I am not sure that it needs to be  
4   spelled out more specifically in this.

5           I mean, GAPLO did seek, at a minimum, that the entire  
6   letter of understanding as proposed would be offered to  
7   landowners, subject to the individual issues that we will  
8   be raising today.

9           MS. HARE:   Okay.   Thank you.

10          MR. JOHN GOUDY:   In terms of -- in terms of how -- to  
11   the extent that the Board decides to make or require any of  
12   the changes that GAPLO is proposing, I agree with my friend  
13   that clearly there are two categories.   One is the  
14   abandonment clause in the easement agreement, and one is  
15   the letter of understanding issues, or the construction  
16   methodology issues.

17          We can leave the question of how the Board deals with  
18   the construction methodology issues for argument.

19          As far as the easement goes, it's one particular  
20   clause that GAPLO is concerned with, and that, I would  
21   suggest, simply falls within the Board's responsibility to  
22   make an order under section 97.

23          So it's not -- it's not necessarily a condition of  
24   approval.   I suppose it would end up being a condition of  
25   approval, but the Board will need to make an order either  
26   rejecting or approving with modifications the form of  
27   easement that has been offered or is to be offered to  
28   landowners.

1 I guess that, generally, that does fall -- that is  
2 covered by a condition of approval, that Union shall offer  
3 to landowners the form of agreement that was approved by  
4 the Board. GAPLO is going to be suggesting a specific  
5 change to the form approved the Board.

6 Those are all of my comments.

7 MS. HARE: Thank you.

8 Mr. Smith, has Union started offering that easement  
9 agreement, and have any landowners signed the easement at  
10 this point?

11 MR. SMITH: It's been offered; we don't have  
12 signatures yet.

13 MS. HARE: Okay. Thank you. So, Mr. Smith, there  
14 have been a couple areas where some changes to the  
15 settlement agreement should be made. I think they are  
16 minor.

17 It would be the Issue 7, with the reference to the  
18 Ontario Energy Board, and perhaps rewording of Issue 11,  
19 that second paragraph. I think that was it.

20 MS. FRY: Also the clarification of this construction  
21 start date issue.

22 MS. HARE: Right. Right, absolutely.

23 MR. SMITH: Yes.

24 MS. FRY: Also, if I might add, there were certain  
25 clarifications in accordance with Board Staff's submission.

26 MR. SMITH: Yes.

27 MS. FRY: And I don't think we have quite all the  
28 intervenors who said: Yea verily, we agree with that.

1 MS. HARE: That is what I was going to get to, Ms. Fry

2 --

3 MS. FRY: Okay. Sorry.

4 MS. HARE: -- which is that I don't know if you will  
5 be able to do that over the break today. But at some  
6 point, I think you would have to contact the other parties  
7 to the settlement agreement to ensure that they are still  
8 in agreement with the settlement as per the changes that  
9 we've discussed.

10 I think they are minor, from what you've said, and I  
11 think the other parties here don't have a problem. But in  
12 fairness, I think the ones that aren't here should have an  
13 opportunity --

14 MR. SMITH: No, no, I do not disagree. I was just  
15 pausing over, in my own mind, how quickly I could do that  
16 administratively, get an e-mail out.

17 Maybe I will get a response today, but I can't  
18 guarantee that is where I end up.

19 MS. HARE: Okay. That's fine. Mr. Smith, could you  
20 please bring your panel forward, introduce them, and we  
21 will have them affirmed?

22 MR. SMITH: Thank you very much. Yes, I would like to  
23 do that.

24 So if I can please ask the panel to come forward and  
25 be seated, I will introduce them. And if they can be  
26 affirmed, that would be great.

27 MR. RUBENSTEIN: With the Panel's permission, I will  
28 take my leave.

1 MS. HARE: Thank you.

2 MS. BLANCHARD: I will as well, Madam Chair. It is  
3 Emma Blanchard on the line.

4 MS. HARE: Thank you, Ms. Blanchard. You are going to  
5 leave as well, Ms. Kyriazis?

6 MS. KYRIAZIS: Yes.

7 MS. HARE: Thank you.

8 MR. SMITH: So we have with us today from my --  
9 closest to me is Mr. Scott Walker. To his left is Roger  
10 Piett. To his left, William "Billy" Wachsmuth. To his  
11 left, Tony Vadlja. And then to his left Dave Wesenger of  
12 Stantec.

13 And if I could please ask them to be affirmed by the  
14 Board, that would be appreciated.

15 **UNION GAS LIMITED - PANEL 1**

16 **Scott Walker, Affirmed**

17 **Roger Piett, Affirmed**

18 **William Wachsmuth, Affirmed**

19 **Aurel "Tony" Vadlja, Affirmed**

20 **David Wesenger, Affirmed**

21 MS. HARE: Mr. Smith, you have got examination-in-  
22 chief?

23 MR. SMITH: Yes.

24 MS. HARE: Thank you.

25 **EXAMINATION-IN-CHIEF BY MR. SMITH:**

26 MR. SMITH: Just a few questions, members of the  
27 Board.

28 First, Mr. Walker, by way of introduction, I

1 understand that you are the manager of pipeline design for  
2 Union Gas?

3 MR. WALKER: That is correct.

4 MR. SMITH: And you have been with Union Gas since  
5 about 1997?

6 MR. WALKER: Yes, I have.

7 MR. SMITH: And prior to that, you were employed by  
8 the Canadian Coast Guard?

9 MR. WALKER: Yes, I was.

10 MR. SMITH: And you a bachelor of applied science in  
11 civil engineering from the University of Waterloo?

12 MR. WALKER: That is correct.

13 MR. SMITH: And you are a professional engineer?

14 MR. WALKER: Yes, I am.

15 MR. SMITH: And as I understand it, you sit on the  
16 Canadian Standards Authority technical subcommittee  
17 on operations and system integrity?

18 MR. WALKER: Yes, I do.

19 MR. SMITH: We will come back to that in a minute.

20 Can you just describe for us, sir, briefly what your -  
21 - by way of overview, what your responsibilities are as  
22 manager of pipeline design?

23 MR. WALKER: Sure. In my current role, I am  
24 responsible for all the design issues on the pipeline side  
25 of our major projects group, so all the major construction  
26 we are doing.

27 MR. SMITH: And this project would fall within that  
28 category?

1 MR. WALKER: Yes, it would.

2 MR. SMITH: Mr. Piett, turning to you, you are the  
3 manager of projects execution at Union Gas Limited?

4 MR. PIETT: That is correct.

5 MR. SMITH: And you've been with Union Gas for some  
6 time?

7 MR. PIETT: That is very correct.

8 MR. SMITH: And you have a bachelor of applied science  
9 in civil engineering, also from the University of Waterloo?

10 MR. PIETT: Yes, that is right.

11 MR. SMITH: Can you please tell the Board briefly what  
12 your responsibility is as the manager of projects  
13 execution?

14 MR. PIETT: I am responsible for all the project  
15 management and the construction management of all our major  
16 projects, and specifically for this hearing responsible for  
17 the Hamilton-to-Milton project, as well as the Lobo  
18 project.

19 MR. SMITH: Mr. Wachsmuth, you are employed as the  
20 senior administrator, regulatory projects and lands?

21 MR. WACHSMUTH: That is correct.

22 MR. SMITH: And you have been with Union Gas since  
23 about 1990?

24 MR. WACHSMUTH: That is correct.

25 MR. SMITH: And before that, you were with the  
26 Ministry of Natural Resources?

27 MR. WACHSMUTH: Yes.

28 MR. SMITH: And you testified before this Board on a



1 number of occasions?

2 MR. WACHSMUTH: That is correct.

3 MR. SMITH: And you have a bachelor of science, a  
4 forestry major, from the University of New Brunswick?

5 MR. WACHSMUTH: That is correct.

6 MR. SMITH: Can you tell the Board briefly,  
7 specifically as it pertains to this hearing, your  
8 responsibility?

9 MR. WACHSMUTH: I will be dealing with some of the  
10 lands issues that come up, and some of the history of the  
11 letter of understanding.

12 MR. SMITH: Thank you very much.

13 Mr. Vadjlja, you are a senior environmental advisor  
14 with Union Gas?

15 MR. VADLJA: Correct.

16 MR. SMITH: And you have a bachelor of science,  
17 resource management, from Guelph University?

18 MR. VADLJA: That is correct.

19 MR. SMITH: And you have testified both before this  
20 Board on a number of occasions, and the National Energy  
21 Board?

22 MR. VADLJA: That is correct.

23 MR. SMITH: Can you tell the Board, by way of  
24 overview, your responsibilities as senior environmental  
25 advisor?

26 MR. VADLJA: Yes. I am responsible for obtaining  
27 environmental approvals and permits with our construction  
28 projects, and developing our environmental policies

1 and practices for the company with regards to construction.

2 MR. SMITH: Thank you.

3 Lastly, you, Mr. Wesenger, I understand you are a  
4 senior principal with Stantec?

5 MR. WESENGER: That is correct.

6 MR. SMITH: Can you describe for me briefly the  
7 business of Stantec?

8 MR. WESENGER: We're an engineering consulting firm,  
9 and the group I am in is responsible for environmental  
10 management practices.

11 MR. SMITH: And for how long have you been with  
12 Stantec?

13 MR. WESENGER: Since 1990.

14 MR. SMITH: I understand that you, or people working  
15 under your supervision, prepared the environmental report  
16 that has been filed by Union in this proceeding?

17 MR. WESENGER: That is correct.

18 MR. SMITH: Members of the Board, just for the record,  
19 that report, which is voluminous, is referenced at Exhibit  
20 A, tab 12, as attachments 1 and 2.

21 Mr. Wesenger, I understand you have a bachelor of  
22 environmental and resource studies from the University of  
23 Waterloo?

24 MR. WESENGER: Yes.

25 MR. SMITH: And you have been employed by Stantec  
26 since about 1990?

27 MR. WESENGER: That's correct.

28 MR. SMITH: And does your curriculum vitae set out

1 accurately your project experience?

2 MR. WESENGER: Yes, it does.

3 MR. SMITH: And that includes comparable-type work, as  
4 I understand it, sir, on projects for Union Gas and other  
5 developers?

6 MR. WESENGER: Yes.

7 MR. SMITH: Members of the Board, perhaps I can -- or  
8 members of the panel, perhaps I can do this through you.

9 Mr. Piett, do you adopt for the purpose of testifying  
10 here today Union's prefiled evidence and interrogatory  
11 responses?

12 MR. PIETT: Yes. Yes, I do.

13 MR. SMITH: Members of the Board, I do have some  
14 additional questions in examination-in-chief, but I failed  
15 to mark as an exhibit, I believe, the CVs of the witnesses,  
16 which you have been provided with, and I propose to do  
17 that.

18 MS. HARE: Let's do that now.

19 MS. DJURDJEVIC: That will be Exhibit K1 (sic).

20 **EXHIBIT NO. K1.1: WITNESS PANEL CVs.**

21 MR. SMITH: Mr. Wachsmuth, maybe I can start with you.  
22 You heard the Chair's questions of me relating to the  
23 letter of understanding, and maybe you can help the Board -  
24 - let's start with this question.

25 What, from Union's perspective, is the purpose of the  
26 letter of understanding?

27 MR. WACHSMUTH: The letter of understanding was really  
28 developed to basically document and -- so that we could, in

1 a very simple format -- so we could -- Union and the  
2 landowners would both know how construction would happen on  
3 their property, and also it would also include what  
4 compensation they would be paid for the work on their  
5 property.

6 It really documents the general practices. It was  
7 really looked to do for the whole loop, how would we  
8 generally be doing topsoil stripping, how we'd be doing  
9 restoration, all of those general aspects of construction,  
10 so that we would be able to do it in a comprehensive -- and  
11 that everybody was treated the same.

12 So we wanted to come with a document that we could use  
13 when we are talking to the landowners, to say: Here is  
14 what we are going to be doing when we are constructing on  
15 your property, and we wanted to go and do it.

16 Really it started out as, really, a four-, five-page  
17 document -- really back in the '80s was when the first one  
18 was done, and it has really progressed over time, but  
19 really the big thing is -- is that it really was meant to  
20 be a simple document, to document what we were going to do,  
21 and it was really the general document.

22 If a landowner had special issues, there is a schedule  
23 2 in the LOU which really can be used to document the  
24 special features on a person's property; for instance, if  
25 they had cattle and they needed to put up special fencing,  
26 or if they had a specialty crop that needed to be protected  
27 from dust. Those things were really to be identified in  
28 schedule 2.

1           The LOU was really meant to be the general document,  
2   so if there was specific issues there was a specific there,  
3   and as well the LOU was really meant to be signed at the  
4   same time as the easement, so it was before construction,  
5   so there were other mechanisms in place if they're to deal  
6   with specific issues during construction through our lands  
7   relation program. And in this case in here, where we have  
8   agreed to the construction monitor, the construction  
9   monitor is also available to deal with specific issues.

10          But the LOU is really meant to be a general document  
11   that talked about Union's general construction practices  
12   and the compensation they would receive.

13          MR. SMITH: So let me ask you this question. The  
14   current form of the letter of understanding that the Board  
15   has before it today, when did that come into effect?

16          MR. WACHSMUTH: I think, as I mentioned before, the  
17   original document was developed in the '80s, and really,  
18   every time we did a loop of the Dawn-Trafalgar pipeline and  
19   then a few of the other pipelines going to some of the  
20   storage pools or other lines, we formed a negotiating  
21   committee with the landowners. And really what it was is  
22   part of the negotiations for the committee for both the  
23   compensation and the construction practices, additional  
24   clauses were added, subtracted, changes, and what was  
25   current.

26          So in the early '90s we added things, and we have  
27   added things right up to 2005 with Strathroy-Lobo, but  
28   there was really -- by 2005 we realized after Strathroy-

1 Lobo that the document was starting to get stale, it was  
2 being difficult to read, there were actually things that  
3 contradicted themselves within the document.

4 So what we did after Strathroy-Lobo was we basically  
5 did a comprehensive review of the Strathroy Lobo document,  
6 and that was how we came up with the document that was  
7 offered at Brantford-Kirkwall.

8 So we really looked to see what practices weren't  
9 used, so if something that was suggested back in 1990 but  
10 had never been used ever again, we took that out.

11 The other thing is we looked at what happened, for  
12 instance, with the tile. The tile section was completely  
13 rewritten to basically look at what our current practices  
14 were, rather than just -- we had the standard of starting  
15 in the '90s. We just kept adding paragraphs.

16 We added and developed a new comprehensive one to talk  
17 about it. It was really done just to bring it up to be a  
18 state-of-the-art document that was really easy to read.  
19 The old document had really just become difficult to read,  
20 and we wanted to do something that was simple. We wanted  
21 to do something that had Union's current practices in it,  
22 and that was why we moved forward with the document for the  
23 Brantford-Kirkwall hearing.

24 MR. SMITH: All right. Well, let me ask you that.  
25 When did you first use the new document?

26 MR. WACHSMUTH: We first used the new document for  
27 Brantford-Kirkwall.

28 MR. SMITH: And to whom did you --

1 MR. WACHSMUTH: We offered it to all of the  
2 landowners. Generally, the LOU talks a lot about practices  
3 in agricultural lands, but there are other facets of it  
4 that would be available and important to everyone, things  
5 like water wells and fencing and things like that.

6 So we did offer it to everyone on the Brantford-  
7 Kirkwall, both the agricultural and others, and all but one  
8 landowner agreed to it without change, and that landowner  
9 was the subject of the expropriation hearing.

10 MR. SMITH: I don't believe this is controversial,  
11 but, Mr. Wachsmuth, can you just tell us your understanding  
12 of how many landowners in the Hamilton-Milton project, how  
13 many participating landowners are there who are members of  
14 GAPLO?

15 MR. WACHSMUTH: In GAPLO's prefiled evidence, they  
16 indicate that they have one landowner who's a member of  
17 GAPLO, and that landowner is on a residential property.

18 MR. SMITH: And are there any agricultural  
19 participating landowners?

20 MR. WACHSMUTH: Not that I am aware of.

21 MR. SMITH: And are there agricultural participating  
22 landowners?

23 MR. WACHSMUTH: Yes, there are some agricultural  
24 properties on the Hamilton-Milton project.

25 MR. SMITH: And as part of Union's notice program with  
26 this application, were these landowners provided notice of  
27 this proceeding?

28 MR. WACHSMUTH: Yes, they were.

1 MR. SMITH: Mr. Walker, if I can just turn to you --  
2 members of the Board, we circulated and you should have a  
3 copy of what's identified as draft standard Z662 by the  
4 Canadian Standards Association; do you have that?

5 MS. HARE: We have that.

6 MR. SMITH: And I propose to mark --

7 MS. HARE: Give that an exhibit number.

8 MR. SMITH: -- that as an exhibit.

9 MS. DJURDJEVIC: That will be Exhibit K2 (sic).

10 MS. HARE: K1.2.

11 **EXHIBIT NO. K1.2: CANADIAN STANDARDS ASSOCIATION**  
12 **DRAFT STANDARD Z662.**

13 MS. DJURDJEVIC: 1.2? Oh, sorry, we are scheduled for  
14 more than one day in this hearing, so --

15 MS. HARE: Well, we're not, but you never know.

16 MS. DJURDJEVIC: All right. So we need to revise the  
17 first exhibit, the package of CVs, as K1.1.

18 MR. SMITH: Not all jokes are created equally.

19 All right, then. Let's move quickly.

20 So, Mr. Walker, let me just turn to you, if I could.  
21 Let's start first with the Canadian Standards Association.  
22 Can you just tell us, sir, at least your understanding of  
23 the role played by the Canadian Standards Association as it  
24 relates to natural gas pipeline regulation?

25 MR. WALKER: Yes. They set the code requirements as a  
26 standard across Canada.

27 MR. SMITH: Okay. And how does that work relate, if  
28 at all, with the TSSA, or the Technical Safety Standards



1 Authority?

2 MR. WALKER: Well, TSSA regulates oil and gas  
3 pipelines in Ontario, including Union Gas pipelines. The  
4 way they really do it is through what they call a coded  
5 option document. That document would say oil and gas  
6 operators in Ontario must follow the CSA Z662 in its  
7 entirety, with some exceptions and additions that it  
8 includes in its coded option document.

9 MR. SMITH: Okay. And so you mentioned Z662, which  
10 has been marked as K1.2. Can you just identify the  
11 document for us?

12 MR. WALKER: That particular document in evidence is a  
13 cover sheet of the upcoming 2015 edition of the code, which  
14 is scheduled for publication in June of this year.

15 MR. SMITH: Okay. And so this is identified as the  
16 draft standard oil and gas pipeline section, and can you  
17 tell us, if you turn to the second page, what is being  
18 discussed in this section of the draft standard?

19 MR. WALKER: Yeah, the main enhancements in section  
20 10-16-1 are that there is a new requirement for a  
21 documented abandonment plan. Part of that abandonment plan  
22 would include landowner consultation. There is also a  
23 reference to an NEB technical paper that you can see in the  
24 note there, "Pipeline Abandonment - A Discussion Paper on  
25 Technical and Environmental Issues."

26 It has a fairly comprehensive list of items and risk  
27 factors that you should use in your evaluation and  
28 development of the abandonment plan.

1 MR. SMITH: And can you just tell me the issue, as it  
2 relates to abandonment? How does this draft standard  
3 address the issue of abandonment and specifically a  
4 requirement, if any, to remove a pipeline?

5 MR. WALKER: Well, it will give you some guidance on  
6 preparing the abandonment plan, and it will say that you  
7 really need to look at it at the time of abandonment based  
8 on a specific site assessment of the various sections of  
9 the pipeline, and in making a determination on the best  
10 course of action in that abandonment plan.

11 Sometimes it may result in removing the pipe;  
12 sometimes it may say abandon in place.

13 MR. SMITH: Now, can you just tell us -- well, first  
14 of all, this draft standard is the product of which  
15 committee of the Canadian Standards Association?

16 MR. WALKER: So the committee that you mentioned  
17 earlier, the operations and system integrity committee that  
18 I am on, it is responsible for sections 9.5 through to the  
19 end of section 10 of the CSA code.

20 So we would be responsible for reviewing any  
21 proposed enhancements or changes to those clauses.

22 MR. SMITH: And where is the standard now in the  
23 drafting process?

24 MR. WALKER: It has gone through our committee, the  
25 technical subcommittee, and it has gone through the  
26 committee above us, which is the technical committee.

27 So from my understanding, it is in the CSA's  
28 administration process between final approvals and

1 publication.

2 MR. SMITH: And has there been a period of public  
3 comment on this?

4 MR. WALKER: Yes, the public comment period was  
5 actually even before the technical subcommittee's review.  
6 So there was a period in December, I think it started, of  
7 2013 where it would have been posted for anyone to be able  
8 to pull up on the website and provide comments.

9 Those comments would have come to our technical  
10 subcommittee for evaluation as well.

11 MR. SMITH: Do you have any familiarity with how the  
12 National Energy Board has dealt with the issue of  
13 abandonment?

14 MR. WALKER: The National Energy Board is a little bit  
15 different, in that you would need to make an application to  
16 abandon pipe. But a lot of the documents that form the  
17 basis of an abandonment plan would be linked to this  
18 process. In fact, it mentions the NEB document in the new  
19 code addition in that note I mentioned.

20 MR. SMITH: Thank you. Those are my questions in  
21 examination in-chief.

22 **QUESTIONS BY THE BOARD:**

23 MS. HARE: Can I just ask you this? The draft letter  
24 talks about receiving permission from the CSA prior to  
25 using this, unless it is for standards development, which  
26 we are not doing today.

27 Did you receive permission from the CSA?

28 MR. WALKER: Yes, I did talk to them and they said

1 that we could discuss it and, you know, show it. But, you  
2 know, we didn't want to distribute it, because until it is  
3 published it is not a final document.

4 MS. HARE: Okay. Thank you.

5 So your panel is ready for cross-examination?

6 MR. SMITH: Yes, they are.

7 MS. HARE: Okay. I think we will take our morning  
8 break now before cross-examination, so we will return at  
9 11:15.

10 MR. SMITH: Thank you.

11 --- Recess taken at 10:52 a.m.

12 --- Upon resuming at 11:18 a.m.

13 MS. HARE: Mr. Goudy, are you ready to proceed?

14 MR. JOHN GOUDY: I am, Madam chair.

15 MS. HARE: Okay.

16 **CROSS-EXAMINATION BY MR. JOHN GOUDY:**

17 MR. JOHN GOUDY: Good morning, panel. I am John  
18 Goudy. I am counsel for GAPLO, and I think I have probably  
19 dealt with Mr. Wachsmuth, at least, on other occasions. So  
20 I am going to have a series of questions for you, and they  
21 are going to basically be broken up into two categories.

22 Like Mr. Smith had mentioned before, one is going to  
23 be the abandonment clause in the proposed easement  
24 agreement, and the other is the construction methodology  
25 items from the letter of understanding.

26 So I will start with the abandonment clause issue.  
27 And Union has proposed a form of agreement. It's at  
28 Exhibit A, tab 13, schedule 3 in the prefiled evidence.

1           And could you confirm for me -- sorry, given the  
2   wording of the issue that's before the Board, and that's  
3   Issue 7 -- "Is the form of easement agreement offered by  
4   Union appropriate?" -- I take it that Union's position is  
5   that the form of easement agreement that is filed in its  
6   prefiled evidence is the appropriate form of easement  
7   agreement for this project?

8           MR. WACHSMUTH: I believe that it was formed -- but it  
9   was also corrected or changed as part of the settlement  
10   agreement, Mr. Goudy. So it probably should go to the  
11   settlement -- the additions that were done as part of the  
12   settlement agreement.

13          MR. JOHN GOUDY: Subject to the settlement agreement?

14          MR. WACHSMUTH: Yes.

15          MR. JOHN GOUDY: And clause 1 of that proposed  
16   agreement deals with Union's restoration obligations on the  
17   surrender of the easement; is that -- are you familiar with  
18   the agreement? I don't know if we can get it on the  
19   screen.

20          MR. WACHSMUTH: Clause 1 deals with a number of  
21   issues, including the restoration on abandonment. That is  
22   correct.

23          MR. SMITH: Sorry, why don't we just give Ms. Hare  
24   just a minute to pull up the easement agreement, if you'd  
25   like, Mr. Goudy?

26          MR. JOHN GOUDY: It may be easiest if we could just  
27   pull up GAPLO's written evidence statement. The excerpt  
28   from the agreement that I am going to be asking about is

1 contained in paragraph 5 of GAPLO's written evidence at  
2 Adobe page 3.

3 In the form of easement agreement as proposed by Union  
4 in this proceeding, the last sentence of clause 1 is what  
5 is set out in GAPLO's written evidence; is that correct?  
6 That's:

7 "The transferor and transferee hereby agree that  
8 nothing herein shall oblige transferee to remove  
9 the pipeline from the lands as part of the  
10 transferee's obligation to restore the lands."

11 MR. WACHSMUTH: I am sorry, which document are you  
12 looking at, Mr. Goudy?

13 MR. JOHN GOUDY: I am looking at what is on the  
14 screen, paragraph 5(a), but what is intended to be  
15 reproduced there is the language, the last sentence of  
16 clause 1 in the proposed agreement filed by Union. I am  
17 just looking for confirmation that that is the language  
18 that Union is proposing, "transferor and transferee hereby  
19 agree that nothing herein shall oblige transferee"? It's  
20 tab 13, schedule 3 in your prefiled evidence.

21 MR. WACHSMUTH: Yes, the first quote is in our current  
22 agreement, which we are proposing at Exhibit A, tab 13,  
23 schedule 3.

24 MR. JOHN GOUDY: And so it is that language that Union  
25 is proposing is appropriate in connection with the issue on  
26 the Board's Issues List and should be approved by the  
27 Board?

28 MR. WACHSMUTH: That is correct.

1 MR. JOHN GOUDY: But Union has proposed different  
2 language than that in other easement agreements in other  
3 projects; correct?

4 MR. WACHSMUTH: That is correct.

5 MR. JOHN GOUDY: And it's proposed different language  
6 about Union's obligations of restoration on surrender of  
7 the easement in different projects as appropriate. So it's  
8 proposed to the Board in those other projects that that  
9 different language was appropriate; is that correct?

10 MR. WACHSMUTH: Those words were the result of a  
11 comprehensive settlement agreement, Mr. Goudy, and they  
12 were agreed to by both parties. So yes, they were  
13 proposed, but it was part of a comprehensive settlement  
14 agreement.

15 MR. JOHN GOUDY: I take it you are referring to  
16 Strathroy-Lobo in particular in that response?

17 MR. WACHSMUTH: For those words it was Strathroy-Lobo,  
18 but in other hearings there have been changes in the  
19 easement agreement again, which were the subject of  
20 comprehensive negotiations in the settlement agreement.

21 MR. JOHN GOUDY: So you will agree that from time to  
22 time, from project to project, Union has proposed different  
23 language in its easement agreement as being appropriate?

24 MR. WACHSMUTH: Yes, there have been different words  
25 proposed as a result of comprehensive negotiations between  
26 Union and the landowners.

27 MR. JOHN GOUDY: And in Strathroy-Lobo, the EB-2005-  
28 0550 proceeding, Union agreed and did replace that last

1 sentence of clause 1 that is proposed in this proceeding?  
2 It replaced it with the language that follows in GAPLO's  
3 written evidence that is on the screen?

4 MR. WACHSMUTH: Yes. Again as a result of a  
5 comprehensive settlement, those were the words and some of  
6 the conditions that were agreed to.

7 MS. HARE: Can we see that next page on the screen,  
8 please?

9 MR. JOHN GOUDY: It may be helpful, Madam Chair, if we  
10 went to Adobe page 19, at the bottom.

11 Mr. Wachsmuth, can you confirm this is a section from  
12 the settlement agreement that was reached in EB-2005-0550?  
13 On the screen, sorry.

14 MR. WACHSMUTH: Sorry, did you say Adobe 19 or 20?

15 MR. JOHN GOUDY: Adobe 19. Sorry, it's Adobe page 19.  
16 It says "GAPLO 18" at the top of the page. My apologies.

17 MR. WACHSMUTH: Sorry, that was my...

18 Yes, as you go back to page 13, this is the settlement  
19 agreement prepared to by Mr. Vogel and Mr. Leslie, or  
20 signed by Mr. Vogel and Mr. Leslie.

21 MR. JOHN GOUDY: Right. And so at the bottom of the  
22 page that we are looking at now, GAPLO 18, the language --  
23 the replacement language that was agreed to in EB-2005-0550  
24 is set out there; correct?

25 MR. WACHSMUTH: Yes, the whole comprehensive  
26 settlement is -- are these pages between 13 and 19, I  
27 believe.

28 MR. JOHN GOUDY: And Union then requested approval of



1 that agreement as part of its application in EB-2005-0550;  
2 correct?

3 MR. WACHSMUTH: That's correct.

4 MR. JOHN GOUDY: And Board approval was granted for  
5 that form of easement agreement?

6 MR. WACHSMUTH: That's correct.

7 MR. JOHN GOUDY: And Union used the same form of  
8 easement agreement again in EB-2007-0063; is that correct?

9 MR. WACHSMUTH: Subject to check, yes.

10 MR. JOHN GOUDY: If we could go to -- again in GAPLO's  
11 written evidence -- Adobe page 46 which is marked "GAPLO  
12 45," Mr. Wachsmuth, can you identify this document, or  
13 simply confirm that it is an excerpt from the prefiled  
14 evidence of Union in that proceeding?

15 MR. WACHSMUTH: Yes, it appears it is an excerpt; I  
16 believe it was our Dawn deliverability project.

17 MR. JOHN GOUDY: And in that 36-inch pipeline project,  
18 Union proposed, as the appropriate form of easement  
19 agreement to the Board, the same form of easement agreement  
20 as in Strathroy-Lobo; is that correct?

21 MR. WACHSMUTH: That is correct.

22 MR. JOHN GOUDY: And it asked the Board to approve  
23 that form of agreement under section 97 of the Act?

24 MR. WACHSMUTH: That is correct.

25 MR. JOHN GOUDY: And the Board approved that form of  
26 Agreement; correct?

27 MR. WACHSMUTH: That is correct.

28 MR. JOHN GOUDY: And that included clause 1 with the

1 Strathroy-Lobo language included?

2 MR. WACHSMUTH: That is my understanding.

3 MR. JOHN GOUDY: So for those two projects, Strathroy-  
4 Lobo and the project in EB-2007-0633, Union agreed that the  
5 appropriate form of easement agreement was one that  
6 included the abandonment language and the landowner option  
7 for removal of the abandoned pipeline from Strathroy-Lobo?

8 MR. WACHSMUTH: Again, I think in Strathroy-Lobo it  
9 was the result of the comprehensive settlement, and this  
10 was really the next hearing and we continued using that  
11 same easement.

12 MR. JOHN GOUDY: But now Union has made a decision to  
13 discontinue use of that provision?

14 MR. WACHSMUTH: That is correct.

15 MR. JOHN GOUDY: And it was the clause that we looked  
16 at previously, the last sentence of clause 1, that Union is  
17 proposing to the Board in this proceeding: Nothing herein  
18 shall oblige the transferee to remove the pipe?

19 MR. WACHSMUTH: Without looking at the words and  
20 subject to check, yes.

21 MR. JOHN GOUDY: I am paraphrasing. That language was  
22 actually proposed by Union in the EB-2005-0550 Strathroy-  
23 Lobo project as well? That was the language that was  
24 originally proposed by Union in that project?

25 MR. WACHSMUTH: Strathroy-Lobo, it was my  
26 understanding that that was part of the comprehensive  
27 settlement, Mr. Goudy.

28 MR. JOHN GOUDY: Yes, but originally when Union made

1 its application to the Board, the form of easement  
2 agreement it was originally proposing was the one in the  
3 form that has been applied for in this project?

4 MR. WACHSMUTH: I am not sure of that, Mr. Goudy,  
5 because there may have been other changes as well that  
6 happened between 2005 and today.

7 MR. JOHN GOUDY: I won't belabour this; I will just  
8 deal with it in argument. But it is in the -- the  
9 settlement agreement that we looked at earlier specifies  
10 the change that was made to the agreement, so I --

11 MR. WACHSMUTH: But I think there were other changes  
12 that have been made since 2005, Mr. Goudy; there were other  
13 things done.

14 Like, for instance, an HST change has been made  
15 between what we filed now and what we filed in 2005, and I  
16 believe there are also issues dealing with postponement.

17 MR. JOHN GOUDY: Okay. The next questions I have  
18 relate to the draft standard -- CSA standard that was made  
19 Exhibit K1.2. So I think my questions are probably for Mr.  
20 Walker.

21 Mr. Walker, you said that you were on the committee, a  
22 committee that reviewed this document?

23 MR. WALKER: That is correct.

24 MR. JOHN GOUDY: But do I take it your committee  
25 wasn't the committee that drafted the document initially?

26 MR. WALKER: No, it was not.

27 MR. JOHN GOUDY: And did your committee make or  
28 propose changes to the document that appear in the copy

1 that we have at this point?

2 MR. WALKER: Our committee did not.

3 MR. JOHN GOUDY: And can you tell me whether any  
4 pipeline landowners were involved in the creation of this -  
5 - these particular provisions in the draft standard?

6 MR. WALKER: I don't know.

7 MR. JOHN GOUDY: You are not aware of any landowner  
8 involvement?

9 MR. WALKER: I am not aware of the make-up of the task  
10 force that put together that wording.

11 MR. JOHN GOUDY: And can you confirm whether there  
12 were any pipeline landowners involved in your committee  
13 that reviewed the document?

14 MR. WALKER: There were not.

15 MR. JOHN GOUDY: The draft provision, assuming that it  
16 is adopted, would require in Ontario, through the TSSA code  
17 adoption regulation -- like you had explained before, it  
18 would require that for the abandonment of a pipeline, a  
19 company would have to abandon a pipeline on the basis of a  
20 documented abandonment plan; correct?

21 MR. WALKER: Correct.

22 MR. JOHN GOUDY: But can you confirm there is no  
23 approval process for abandonment in Ontario?

24 MR. WALKER: That would also be correct.

25 MR. JOHN GOUDY: So in the absence of a regulatory  
26 approval process, this -- these proposed sections in the  
27 CSA standard only require the company to prepare a plan?

28 MR. WALKER: That is correct, but the TSSA would

1 monitor our abandonment plans. They could come in and  
2 audit it at any point in time.

3 MR. JOHN GOUDY: But as you said, a company like Union  
4 would not require TSSA approval to abandon a pipeline?

5 MR. WALKER: It would not.

6 MR. JOHN GOUDY: At the end of the day, the decision  
7 about how to abandon a pipeline, whether in place or  
8 through a removal, is a decision made by the company?

9 MR. WALKER: It would ultimately be made by the  
10 company, but it would be made based on a comprehensive  
11 abandonment plan that would have to be defended with our  
12 regulator.

13 MR. JOHN GOUDY: But you have already told me that  
14 there is no approval process.

15 MR. WALKER: Not pre-approval, but abandonment is a --  
16 I'll say it's a hot topic within industry. I fully expect  
17 that if we were to prepare a large-scale abandonment, the  
18 TSSA would be very interested in it.

19 MR. JOHN GOUDY: Interested, but without any  
20 regulatory place to --

21 MR. WALKER: That would be correct.

22 MR. JOHN GOUDY: -- to require approval?

23 The next line of questions I have relates to the  
24 letter of understanding. So again, it may be Mr. Wachsmuth  
25 that will end up answering the bulk of these.

26 MS. FRY: Mr. Goudy, you are finished asking questions  
27 on abandonment?

28 MR. JOHN GOUDY: I am finished asking questions on the

1 CSA standard and abandonment, yes.

2 MS. FRY: Okay. So since you have a number of  
3 different subject areas, maybe I could just interject a  
4 couple of questions while abandonment is still fresh in  
5 your minds.

6 MR. JOHN GOUDY: Certainly.

7 MS. FRY: Just to understand, I mean, what we are  
8 hearing is that the two parties have different ideas as to  
9 what the abandonment clause should say.

10 Can you gentlemen, whichever one is appropriate, just  
11 tell me, in operational terms, what is the difference  
12 between what the two sides want?

13 MR. WALKER: I think the fundamental difference is  
14 that we feel rather strongly that an abandonment plan  
15 should be made at the time of abandonment based on codes  
16 and regulations that are in place at the time and include a  
17 detailed assessment of all the site-specific risk factors  
18 involved, and that sometimes that will say that pipe should  
19 be removed and sometimes that will say that pipes shouldn't  
20 be removed.

21 It is not a "one solution fits all" kind of  
22 assessment.

23 MS. FRY: Okay. Does anybody else want to elaborate  
24 on that?

25 MR. PIETT: Just further elaboration in that one  
26 solution doesn't fit all. We don't know now what the land  
27 use will be later on or who will own the property, so  
28 again, it is difficult to predetermine that now. Also,

1 again, landowner definitely has some, you know, significant  
2 interest in the issue of abandonment. However, we have to  
3 take into -- consider other stakeholders that do have  
4 authority, in that it could be something like an NEC who we  
5 are dealing with now. There is a lot of other  
6 environmental agencies, and an abandonment project,  
7 especially a large one, could have a significant impact on  
8 the environment and an actual -- the option -- or the  
9 better option would be to leave it in place and abandon it  
10 properly through the checklist that we need to go through  
11 and develop that plan.

12 MS. FRY: So, I mean, if I am understanding you  
13 correctly, you would always have to go through whatever  
14 that regulatory process consists of, so why does it make a  
15 difference if you agree upfront on some principles for  
16 abandonment as opposed to making the plan later on? Could  
17 you just go over that again?

18 MR. WALKER: Well, what they are asking us to agree to  
19 upfront would be to say that the landowner can request  
20 removal of the pipe at their request, and there are some  
21 situations even in the filed evidence that GAPLO put in  
22 that there are some situations, environmentally sensitive  
23 areas, some of the areas that have been mentioned, where it  
24 doesn't make sense to remove the pipe.

25 MS. FRY: Okay. That, I understand. I am just not  
26 quite understanding clearly why the approvals required by  
27 various agencies would complicate that.

28 MR. WALKER: Part of the abandonment plan would be --

1 I mean, it includes landowner consultation, but it also  
2 would include consultation with environmental agencies,  
3 conservation authorities, wherever the pipe may be. It is  
4 specific to each site, but all of those agencies would be  
5 consulted during the development of that abandonment plan,  
6 so there are a number of interested parties, let's say.

7 MS. FRY: You are saying that would be harder to do if  
8 you agreed on the parameters for abandonment upfront? Is  
9 that what you are saying?

10 MR. WALKER: Well, to say upfront that we would  
11 automatically remove the pipe, yeah, would circumvent that  
12 process.

13 MR. PIETT: Just to describe it better, to abandon,  
14 you know, like, say, the Hamilton-Milton piece in the  
15 future -- 20, 40 years, 50 years -- it would be no  
16 different and actually worse than constructing a new  
17 pipeline, because an abandonment procedure, where you are  
18 removing the pipe, we actually have to do a lot more work  
19 with the land to get the pipe out.

20 You actually end up filling the trench back in and  
21 retrenching it for the new pipeline to go in, so there is  
22 significant impact, and I would say it is definitely going  
23 to be a bigger impact.

24 So therefore all the permits that we must receive now  
25 before we build the pipeline, we are going to receive those  
26 permits to remove a pipeline and build the new pipeline, or  
27 even if we didn't build the new pipeline, at least remove  
28 it, and we are going to have significant impact, just as we



1 do now when we would mitigate it, but we still have to go  
2 through the process to get all those permits from any  
3 stakeholder or agency that would have jurisdiction on water  
4 crossings, wetlands, et cetera.

5 MS. FRY: Okay. Thanks.

6 Okay. And so I want to ask you also about the draft  
7 CSA standard. So I take it this is -- is this a -- this is  
8 a standard that is much broader than abandonment  
9 situations, I take it? Yes?

10 MR. WALKER: Yes, it is.

11 MS. FRY: Okay. So just for my information, when  
12 Union is following the various applicable CSA standards, is  
13 it always working to the standard, or are there situations  
14 in its business generally where it might decide to actually  
15 have standards that are greater than the CSA standard?

16 MR. WALKER: We would meet or exceed code.

17 MS. FRY: Yes, okay. So I am asking you -- so you are  
18 saying there are situations when Union would decide to  
19 exceed code; is that correct?

20 MR. WALKER: Yeah, the code may have a depth of cover  
21 requirement. Sometimes we exceed that, as an example.

22 MS. FRY: Thanks.

23 MS. HARE: Okay, well, since we interrupted, I will  
24 just continue.

25 Is the easement always surrendered on abandonment? Or  
26 do you have situations where the pipeline is abandoned but  
27 you retain the easement in the event that in the future you  
28 want that corridor?

1 MR. WACHSMUTH: If we keep -- the pipe stays in the  
2 ground, Union will retain the easement. We have to have  
3 the easement there, because it's still our pipe, so we  
4 would own the pipe, so we have to have a right to have the  
5 pipe in the ground.

6 MS. HARE: Even if it's abandoned?

7 MR. WACHSMUTH: Even if it's abandoned. Our practice  
8 is not to surrender the easement.

9 MS. HARE: If the pipe is in the ground?

10 MR. WACHSMUTH: That's correct.

11 MS. HARE: Another question. The easement language  
12 talks about the proposed -- what Mr. Goudy is asking for in  
13 terms of the language used in the Strathroy-to-Lobo talks  
14 about the transferor. What if it is a new owner? Does  
15 that new owner still have the right to ask for it to be  
16 taken out of the ground?

17 MR. SMITH: As a matter of law, they would be required  
18 to take -- well, the easement will be registered on title,  
19 so it runs with the land, and so you take title to the land  
20 subject to the covenants on the land as registered.

21 MS. HARE: Okay. So "the transferor" doesn't refer  
22 necessarily to the person that actually signed the  
23 document?

24 MR. SMITH: That's correct.

25 MS. HARE: It is whoever has, then, title?

26 MR. SMITH: That's correct.

27 MS. HARE: Can you just explain to me why you -- you  
28 explained, well, that you made the change for those two

1 projects because it was part of a comprehensive settlement  
2 discussion. Why is it that you do not want to offer that  
3 again? Is it just because you want to keep your options  
4 open for 30 years from now, 40 years from now?

5 MR. WACHSMUTH: I guess what it was when we really  
6 went back and looked at the revisions to the easement, we  
7 went back and realized that some of the -- there was a  
8 potential here that we could end up in conflicts.

9 We don't know what is going to happen to the  
10 abandonment or what is going to happen to the laws and  
11 rules. We know that abandonment is a very big issue. The  
12 NEB has really had a couple of hearings -- a number of  
13 things have changed since 2005, and a lot of those have  
14 been at the NEB. They have had their lands consultation  
15 initiative, which talked about the physical abandonment of  
16 pipe, and there was also a monetary version of how they  
17 dealt with paying for abandonment of pipe. And abandonment  
18 is a big issue, and Mr. Goudy and the GAPLO evidence filed  
19 a big report where there is a number of studies that are  
20 still ongoing on abandonment.

21 So, I mean, we are looking at it as a live issue, and  
22 we really just don't want to close any doors now. And as  
23 Mr. Walker stated, we think the best time to figure out how  
24 you are going to abandon a pipe is when it is going to be  
25 abandoned, not when it is going to be constructed.

26 MS. HARE: Thank you. Those are my questions. Mr.  
27 Goudy, sorry for the interruption.

28 MR. JOHN GOUDY: That is quite all right. I have a

1 follow-up question for Mr. Piett.

2 What experience do you and/or Union have with the  
3 abandonment of large-diameter pipelines?

4 MR. PIETT: Very little, as we have never abandoned  
5 anything on the Dawn-to-Parkway stretch.

6 Again, those are large-diameter pipelines that we rely  
7 on for all our business, as everyone has been through,  
8 through this hearing. And again, we need the capacity and  
9 we protect the pipeline to ensure it will last forever,  
10 basically, and we have never had to abandon any of those  
11 pipelines.

12 MR. JOHN GOUDY: So I take it your evidence earlier  
13 about the comparison between the effects of pipeline  
14 removal and the effects of pipeline construction are just  
15 speculation?

16 MR. PIETT: No, I would say that comes from building  
17 pipelines and being on construction and knowing what it  
18 takes -- before we can initiate construction, we have to  
19 basically predetermine everything that we are going to do,  
20 and I can quite easily think about constructing a 48-inch  
21 pipeline, and then I can quite easily think about  
22 abandoning a 48-inch pipeline, all the work and effort that  
23 would take.

24 We also -- we have had cases where we have had  
25 pipeline replacements, which is very similar. It hasn't  
26 had to get into abandonment -- or, you know, of -- well, in  
27 some ways it is abandonment of existing pipe, but then we  
28 install a new pipe there, and so we have gone through that

1 exercise in smaller diameter, such as 16-inch pipe.

2 MR. JOHN GOUDY: And you will agree with me that what  
3 GAPLO is proposing in terms of clause 1 in the easement  
4 agreement and what was agreed to in Strathroy-Lobo is an  
5 option for the landowner to have the pipeline removed?

6 MR. WACHSMUTH: That's fair.

7 MR. JOHN GOUDY: To the extent that the landowner  
8 decides that the impacts of pipeline removal would be too  
9 great, the landowner could decide not to exercise that  
10 option.

11 MR. PIETT: We can't predetermine what the landowner  
12 would decide, but we do know that there would be other  
13 agencies that would, or stakeholders that we would have to  
14 consult with to determine if that, as we stated earlier,  
15 was the preferred way to abandon the pipeline.

16 MR. WESENGER: If I could just add to what Mr. Piett  
17 said, with the Niagara Escarpment Commission, in developing  
18 anything across their lands, they need to know that it is  
19 essential.

20 I think, in this case, they would certainly challenge  
21 the environmental impact of removing a pipeline across  
22 escarpment lands, that it would be essential to remove it  
23 versus leaving it in place, because there would be much  
24 less impact to leaving it in place to the escarpment  
25 lands itself.

26 MR. JOHN GOUDY: I am going to move on to the letter  
27 of understanding issues.

28 As part of the settlement agreement -- and this was

1 discussed earlier this morning -- you can confirm that  
2 Union has agreed that it will offer, as a minimum to  
3 landowners, the form of letter of understanding that was  
4 part of the settlement agreement in this proceeding?

5 MR. WACHSMUTH: That is correct.

6 MR. JOHN GOUDY: And that -- that letter of  
7 understanding sets out -- in one way, sets out minimum  
8 construction commitments by Union Gas to landowners;  
9 correct?

10 MR. WACHSMUTH: I think, as I stated before, it talks  
11 about what our general practices are for the construction  
12 of the proposed pipeline, yes.

13 MR. JOHN GOUDY: But it sets minimum standards that  
14 Union agrees that it will do on a landowner's property?

15 MR. PIETT: If the landowner considers it minimum,  
16 fine. I would term it as appropriate, and runs through the  
17 history of us building pipelines and developing our  
18 construction practices and with input from all  
19 stakeholders, including landowners, that it is an  
20 appropriate approach to building the pipeline.

21 MR. JOHN GOUDY: Union agrees that -- just to get back  
22 to this idea of a minimum, Union is agreeing, or committing  
23 in the letter of understanding to do at least what it says  
24 in the letter of understanding, and agreeing not to do less  
25 than what is in the letter of understanding.

26 MR. WACHSMUTH: Sorry, yes. I was thinking like --  
27 for instance, for depth of cover, we have agreed in the LOU  
28 to go 1.2 metres. But I think Mr. Walker talked earlier

1 that the code only requires 0.6 meters.

2 So that is where I was having concerns with the  
3 minimum, Mr. Goudy.

4 MR. GOUDY: Right. It is simply -- Union has agreed  
5 it is not going to go less than what the letter of  
6 understanding says?

7 MR. WACHSMUTH: That's correct.

8 MR. JOHN GOUDY: And the letter of understanding, can  
9 you agree with me that it provides details about Union's  
10 construction methodology that aren't provided elsewhere in  
11 Union's prefiled evidence in this hearing process?

12 MR. WACHSMUTH: That's fair.

13 MR. JOHN GOUDY: GAPLO requested a copy of the letter  
14 of understanding in Interrogatory 12; do you recall that?

15 Perhaps we could bring that up on the screen, Union's  
16 response to GAPLO Interrogatory 12?

17 You have agreed with me that the letter of  
18 understanding contains details about construction  
19 methodology that weren't included in the prefiled evidence.

20 Can you agree with me that GAPLO requested a copy of  
21 the letter of understanding at the interrogatory stage, but  
22 Union Gas did not -- or declined to provide that document?

23 MR. WACHSMUTH: That is correct.

24 MR. JOHN GOUDY: So earlier it may have been Mr. Smith  
25 in his submissions, or it may have been someone on the  
26 panel that said landowners -- I think it was an answer to a  
27 question in-chief -- landowners had notice of the  
28 proceeding? Landowners along the Hamilton-to-Milton line

1 had notice of this proceeding: correct?

2 MR. WACHSMUTH: That is correct.

3 MR. JOHN GOUDY: But they didn't have the letter of  
4 understanding?

5 MR. WACHSMUTH: At the time -- as part of our OEB  
6 process, we were required to serve notice of all of the  
7 landowners. At that point in time, they did not have a  
8 copy of our LOU or the easement package that we were  
9 offering.

10 We hadn't got that far in our negotiation process when  
11 the notice went out, Mr. Goudy.

12 MR. JOHN GOUDY: And the letter of understanding, it  
13 wasn't provided in this proceeding until -- well, it hasn't  
14 been filed in this proceeding until the settlement  
15 agreement, so just in the last few days; correct?

16 MR. WACHSMUTH: That's correct.

17 MR. JOHN GOUDY: There was a letter of understanding  
18 used by Union in the Strathroy-Lobo project; correct?

19 MR. WACHSMUTH: That's correct. It was a result of a  
20 comprehensive settlement agreement.

21 MR. JOHN GOUDY: And as you explained earlier, Mr.  
22 Wachsmuth, that document and the letter of understanding  
23 document generally, it's evolved based on many projects?

24 MR. WACHSMUTH: At least ten.

25 MR. JOHN GOUDY: At least ten? And in a lot of cases,  
26 projects involving consultations with GAPLO?

27 MR. WACHSMUTH: GAPLO was involved in some of them,  
28 yes.



1 MR. JOHN GOUDY: And consultation with landowners?

2 MR. WACHSMUTH: That's fair.

3 MR. JOHN GOUDY: The letter of understanding in  
4 Strathroy-Lobo was filed with the Board in EB-2005-0550; is  
5 that correct?

6 MR. WACHSMUTH: Yes, Union committed to doing that in  
7 the transcripts of the -- or the settlement agreement.

8 MR. JOHN GOUDY: And we looked briefly at a section  
9 from EB-2007-0663. Can you confirm that Union used the  
10 same -- the same form of letter of understanding on that  
11 project as in Strathroy-Lobo?

12 MR. WACHSMUTH: No, I can't right off the bat, sir.

13 MR. JOHN GOUDY: Okay. Could we bring up GAPLO's  
14 evidence again at -- I believe it's Adobe page 46.  
15 This is that excerpt, again from Union's prefiled evidence  
16 in that proceeding.

17 If you look at paragraph 73 at the bottom of that  
18 page, it says:

19 "Union will also use a letter of understanding  
20 between Union and landowners for the project, and  
21 specifically the form of the LOU employed in the  
22 Strathroy-Lobo project."

23 MR. WACHSMUTH: I don't know whether there were any  
24 changes made when they actually went out and signed the  
25 agreement with the landowners on the project. That would  
26 have been probably the form they used as a starting point.

27 I don't have that information with me, Mr. Goudy, and  
28 I don't know. There may not have been any changes; I just

1 don't know.

2 MR. JOHN GOUDY: But that would have been used as a  
3 starting point?

4 MR. WACHSMUTH: That's fair.

5 MR. JOHN GOUDY: Including all the substantive  
6 provisions in the Strathroy-Lobo document?

7 MR. WACHSMUTH: That's fair.

8 MR. JOHN GOUDY: On the next page in that document, at  
9 paragraph 74, Union's evidence is that the LOU, or the  
10 letter of understanding, provides a benchmark for  
11 individual negotiations for land rights.

12 Do you see that statement?

13 MR. WACHSMUTH: Yes, I do.

14 MR. JOHN GOUDY: Would you agree with me that the  
15 letter of understanding also provides a benchmark for  
16 construction methodology?

17 MR. WACHSMUTH: I think it provide a description of  
18 what our construction practices were. I think what you are  
19 talking about at paragraph 74 is really the compensation  
20 aspects in the letter of understanding.

21 MR. JOHN GOUDY: Right, and I am asking you whether a  
22 benchmark is the appropriate term for the letter of  
23 understanding.

24 MR. WACHSMUTH: It provide a general understanding of  
25 what we will do. If you want to call that a benchmark, I  
26 am not sure.

27 MR. JOHN GOUDY: The letter of understanding also --  
28 it deals with construction methodology. It also details

1 the participation of the landowner in the decision-making  
2 process about construction; is that correct?

3 MR. WACHSMUTH: I think there are a number of other  
4 things that Union does and has in place to help the  
5 landowner to deal with issues that come up during  
6 construction.

7 MR. JOHN GOUDY: But the letter of understanding --  
8 included in the terms of the letter of understanding are  
9 sections where the landowner is given a role in the  
10 decision-making process.

11 MR. WACHSMUTH: I mean -- yes, I mean, for example,  
12 topsoil stripping, there are different opportunities, and  
13 we talk to the landowner during our pre-construction  
14 meeting to see whether -- what type of, like, topsoil he  
15 wants stripped on his easement. I mean, so if that is  
16 giving the landowner options, yes, that is correct.

17 MR. JOHN GOUDY: The letter of understanding, as you  
18 described this morning, the letter of understanding  
19 proposed in this proceeding, which is the one attached to  
20 the settlement agreement, it makes changes to substantive  
21 items that were in the Strathroy-Lobo letter of  
22 understanding; correct?

23 MR. WACHSMUTH: It makes changes, yes.

24 MR. JOHN GOUDY: Your evidence earlier was that the  
25 Strathroy-Lobo form of letter of understanding had become  
26 unworkable?

27 MR. WACHSMUTH: We think -- in my opinion, in places  
28 of it, it was unworkable.

1 MR. JOHN GOUDY: Right, and so the format of the  
2 agreement has been changed?

3 MR. WACHSMUTH: That's correct.

4 MR. JOHN GOUDY: In order to make it, in Union's view,  
5 workable?

6 MR. WACHSMUTH: That's correct.

7 MR. JOHN GOUDY: But will you agree with me that not  
8 all of the changes that Union has made to the letter of  
9 understanding from the time of Strathroy-Lobo to now, not  
10 all of those changes are changes of form or structure?

11 MR. WACHSMUTH: Yes.

12 MR. JOHN GOUDY: There are substantive changes to  
13 individual construction methodology items; correct?

14 MR. WACHSMUTH: I think the tile is probably the one  
15 where some of the biggest changes were made, Mr. Goudy.  
16 And what we did there is we basically had a person who had  
17 been -- worked with Union, and before that he worked with  
18 an engineering consulting firm who was involved in working  
19 with landowners to develop the site-specific tile plans for  
20 their properties.

21 So what he did was he looked at Strathroy-Lobo, he  
22 looked at what we were currently actually doing in the  
23 field, working with the landowners to get the tile plans,  
24 to get them approved by the landowners, and then to  
25 implement those tile plans during and after construction.

26 And he really changed the tile to be more what we were  
27 doing rather than the words that were in the Strathroy-Lobo  
28 agreement.

1       So, I mean, yes, that was probably one of the bigger  
2   changes in it, but we really just tried to do that so that  
3   it flowed better, and better reflected what was currently  
4   happening in the field.

5       MR. PIETT: In addition to that, too, a lot of the  
6   changes were practical changes. Like, there were some  
7   things that -- again, going back in history, maybe the  
8   comprehensive settlement things agreed to, that practically  
9   we just could not do them in the field, and because of that  
10   then we reviewed that also and ensured that it was  
11   something that we could carry out and commit to, and that  
12   was practical. And again, if I use Brantford-to-Kirkwall,  
13   it has been all signed off by all the landowners except for  
14   the one. And again, it is a workable document. It is a  
15   good document that we the builder can live up to and the  
16   landowners can agree to.

17       MR. JOHN GOUDY: Well, I will take you through, now,  
18   the specific provisions that GAPLO is looking at, the  
19   substantive changes, and perhaps you can tell me whether  
20   the changes are -- the changes which reflect -- the  
21   proposed changes from GAPLO reflect the Strathroy-Lobo  
22   letter of understanding.

23       Perhaps you can tell me whether any of those  
24   individual changes proposed are unworkable, because GAPLO  
25   is not proposing that the form of the letter of  
26   understanding proposed is problematic. The questions I  
27   have for you are about individual substantive construction  
28   items.

1           So do you have a copy of the table that was filed by  
2 GAPLO in front of you?

3           MR. PIETT: Yes, we do.

4           MS. HARE: We should give that an exhibit number.

5           MS. DJURDJEVIC: That will be Exhibit K1.3.

6           **EXHIBIT NO. K1.3: GAPLO TABLE.**

7           MR. JOHN GOUDY: Madam Chair, I have additional  
8 copies, to the extent that there is anyone that needs an  
9 additional copy.

10          MS. HARE: The Panel has copies.

11          MR. SMITH: We have copies.

12          MR. WACHSMUTH: We have copies.

13          MS. HARE: We are fine.

14          MR. JOHN GOUDY: GAPLO is the only party left, so --  
15 okay.

16          So if you have that Exhibit K1.3 in front of you, I am  
17 just going to go through the changes that GAPLO is  
18 requesting from the Board to Union's construction  
19 methodology.

20          So on page 2, it's -- just to explain, this table in  
21 the left-hand column, the -- more or less the entire text  
22 of the Hamilton-to-Milton LOU is set out. In the right-  
23 hand column are the proposed additions or changes requested  
24 by GAPLO. They don't follow, necessarily, the order that  
25 they appeared in in the Strathroy-Lobo letter of  
26 understanding, but this is what GAPLO understands to be the  
27 appropriate location for dealing with those items.

28          So clause 2 in the Hamilton-to-Milton LOU deals with

1 testing for soybean nematode. Do you have that provision  
2 in front of you?

3 MR. VADLJA: We do.

4 MR. JOHN GOUDY: So what was in the Strathroy-Lobo  
5 letter of understanding was that Union would work with  
6 OMAFRA and the University of Guelph to develop a best-  
7 practices protocol and will employ the most current best  
8 practice at the time of construction.

9 What Union has proposed in this project is only that  
10 the company will work with OMAFRA to develop the most  
11 current best practice.

12 So is it -- is it that Union is committing to  
13 developing a best practice but not to implementing it?

14 MR. VADLJA: No, that is not correct. Our goal is to  
15 develop a best practice and implement that best practice.

16 MR. JOHN GOUDY: So I take it, then, that Union  
17 wouldn't have a problem with the language from the  
18 Strathroy-Lobo letter of understanding that clarifies that  
19 you are developing the best practice and at the time of  
20 construction employing the most current best practice?

21 MR. VADLJA: No, I don't have a problem with that.  
22 No.

23 MR. PIETT: However, just to step in here, the point  
24 we focused on in this paragraph was that you... University  
25 of Guelph...

26 MS. HARE: Is your mic on?

27 MR. PIETT: We are live. Sorry about that.

28 Again, just to point out that Mr. Vadjla said yes,

1 that that is not an issue. And hopefully we're not into  
2 wordsmithing here, but the point here that -- why we didn't  
3 accept it was University of Guelph was in this -- and  
4 again, we have reviewed that issue, and at this point in  
5 time University of Guelph doesn't offer up that expertise,  
6 so therefore why should we write that into this document?

7 OMAFRA does, and Mr. Vadjla and Mr. Wesenger can  
8 comment on that, but again, we are focused on two different  
9 things in that statement.

10 MR. VADLJA: I think the key point here is having a  
11 discussion with the most appropriate experts, be they  
12 OMAFRA or be they the University of Guelph. I mean, I  
13 would love to go back to the University of Guelph, my old  
14 alma mater, and have a chat with them about this. And if  
15 they are the experts, we would go back to them as well, but  
16 it's -- the focus is on developing the most best practice,  
17 talking with the experts, and then implementing the  
18 practice in the field.

19 MR. JOHN GOUDY: I can respond that GAPLO's concern is  
20 more with the implementation of the plan, and so -- but I  
21 think I have got your agreement that Union is committed to  
22 employing the most current best practice at the time of  
23 construction.

24 MR. VADLJA: Yes, we are.

25 MR. JOHN GOUDY: And perhaps this is a question for  
26 Mr. Smith, but would Union agree to a condition requiring  
27 it to employ the most current best practice at the time of  
28 construction?



1           MR. SMITH: Yes, I mean, I don't -- sorry if we missed  
2 the point. I thought we had captured already that we would  
3 live up to the development of the best practice by living  
4 up to it. And the concern was that the University of  
5 Guelph, despite historic expertise, doesn't have it  
6 anymore, so I don't think that is an issue.

7           MR. JOHN GOUDY: The next item is on page 3, dealing  
8 with water wells, which is section 4 in the proposed letter  
9 -- or, sorry, the Hamilton-to-Milton letter of  
10 understanding. This is not actually an item from  
11 Strathroy-Lobo. This is an additional item.

12           And so the question is: Will Union commit to  
13 providing the laboratory reports or results to the  
14 landowner on request?

15           MR. SMITH: Yes.

16           MR. JOHN GOUDY: In section 5, staking of the work  
17 space, you will see in the right-hand column two  
18 commitments that Union has taken out of the letter of  
19 understanding.

20           Could you -- perhaps you could explain why each of  
21 those is no longer a commitment of Union in this project.

22           MR. PIETT: First of all, I believe that the wording  
23 we have adequately covers things.

24           But there is a couple that are actually impractical to  
25 do. I would put them in that category because actually  
26 when we lay out the easement, we will stake the easement  
27 and we also stake the outer bounds of the working area, so  
28 temporary land use.

1           So the first paragraph, which is asking us not to  
2   remove stakes, is just impractical because when we strip  
3   the topsoil off the easement -- so over the trench in the  
4   area where we restore subsoil -- we actually push it off  
5   the easement and store it on temporary land use which  
6   we have paid for. And in doing so, the stakes that are  
7   laid out at 30-metre increments along the pipeline are  
8   removed.

9           However, when they are removed, that topsoil pile  
10   become a delineation of the easement, so we know exactly  
11   where it is. Then when we remove the subsoil from the  
12   trench line and pile it in between trench line and that  
13   topsoil pile and we ensure that isn't mixed, again  
14   the easement edge is delineated.

15          So to go back in and re-stake it serves no purpose.

16          And in the second one, again asking for the stakes to  
17   be put in after construction for tile work, again, we all  
18   know where the easement is because that is the part that  
19   has been worked up for temporary land use.

20          The actual work that is done with the tile work occurs  
21   both on easement and off easement. And again, that is a  
22   plan that we develop with the landowner, utilizing a  
23   drainage expert to lay out tiling plans that may again  
24   start on easement and end up quite a distance off easement.

25          So again, to stake the easement edge serves no  
26   purpose.

27          MS. HARE: So I want to understand what you are  
28   suggesting, though, because the topsoil would normally be

1 stored on the temporary work space. But you are saying  
2 stored off easement.

3 So by "off easement" do you mean temporary work space,  
4 or do you mean if it's taken elsewhere and brought back  
5 later?

6 MR. JOHN GOUDY: My understanding of the provision  
7 that was in the previous form of letter of understanding is  
8 that it is dealing with topsoil that is stored off of the  
9 easement, not -- I am not sure that it is necessarily  
10 called temporary work space; it may be called topsoil  
11 storage space.

12 But it is an area, an additional area that is open to  
13 Union's use outside of the permanent easement.

14 MS. HARE: Right.

15 MR. JOHN GOUDY: So it is not topsoil taken away and  
16 brought back. It is topsoil piled adjacent to the  
17 easement.

18 MS. HARE: Okay.

19 MR. JOHN GOUDY: On item 6 at the bottom of page 3,  
20 Union previously provided that a landowner could request a  
21 mulch layer be provided between the existing topsoil in the  
22 topsoil storage area and the stripped topsoil pile where a  
23 crop is not present, to provide the buffer between the  
24 virgin topsoil and the stripped topsoil.

25 Is that something that Union is prepared to commit to  
26 again in this project?

27 MR. PIETT: No. Again, I will put that in the  
28 category of it's not practical and there is no value added

1 in it. I will ask Mr. Wesenger to maybe comment on past  
2 practice.

3 The other thing, too, is that we haven't had any  
4 landowners even ask for this. So, again, I am not sure if  
5 they even see the value in it as well, just the aspects of  
6 what it could do or can't do.

7 MR. WESENGER: Certainly the intent there is to define  
8 the boundary between the topsoil that is stripped from the  
9 easement and the virgin topsoil off easement, as you  
10 described it, Mr. Goudy.

11 But that topsoil that is stripped could sit there the  
12 for a period of four months or greater, and what could  
13 happen is that material that is laid down as a mulch layer  
14 between them could begin to decompose and begins to compost  
15 and is no longer discernible.

16 Once you pull that topsoil back, it doesn't aid the  
17 equipment operator in any way to define that boundary.

18 The equipment operator is a highly trained operator  
19 who can define that just by the feel of his blade, that  
20 interface.

21 He also will be assisted by the soils inspector in  
22 monitoring that. The soils inspector is a professional  
23 agrologist certified in the inspection of sediment erosion  
24 control, and has extensive experience in overseeing this  
25 type of operation.

26 The other concern that we could have is the question  
27 where would the source come from that would act as that  
28 interface between -- as the mulch layer, and it could

1 introduce other invasive species -- noxious weeds, that  
2 sort of thing -- and that would be a concern.

3 MR. JOHN GOUDY: So it's Union's evidence that this  
4 has not -- this option has not been exercised by landowners  
5 in the past?

6 MR. WACHSMUTH: That is my understanding, Mr. Goudy.

7 MR. JOHN GOUDY: The next item is immediately below  
8 it, and that is the commitment at the landowner's request  
9 to separate distinct subsoil horizons. Is that something  
10 Union is prepared to commit to?

11 MR. PIETT: The first headline on this -- especially  
12 for these three requests near the -- the other issue here  
13 is "at the request of the landowner." So if the landowner  
14 just asks, then we have to do to live up to the LOU.

15 So that is a concern to us, and that's why you will  
16 see the new language is typically "in consultation with" or  
17 "utilizing an expert to determine," and we will do that.

18 This one here, again, the wording is so general and  
19 includes, you know, some different things that it just  
20 wasn't specific enough for us. There are circumstances  
21 where we do separate distinct soils, but that is upon  
22 review of our topsoil inspector, as well as any expert that  
23 we would need.

24 So something like a blue clay, if we encounter it, we  
25 definitely will remove it, because it creates other issues  
26 for us in construction. And there is other different  
27 things again -- maybe Mr. Wesenger can talk to it and just  
28 explain why we just don't want ultimate authority being

1 with the landowner due to the issues that might be in the  
2 subsurface.

3 MR. WESENGER: Certainly. On Hamilton-to-Milton, this  
4 is not a predominant condition that would be anticipated.  
5 There may be one or two soil types for a very, very short  
6 stretch where this could occur.

7 Really what you have there and we are talking about  
8 is the subsoil, where you have undesirable subsoil which  
9 would be the clay-type material, which could be excavated  
10 in the lower part of the trench, and mixing that with the  
11 more desirable subsoil. So we would want to separate those  
12 out.

13 But in this case, we could certainly look at including  
14 -- where it is isolated in such short stretches, minimal  
15 stretch for 100 meters or 200 meters or so, that would be  
16 included in an environmental protection plan where the  
17 soils inspector would look out for the potential for that  
18 to happen.

19 If he saw that it was beginning to happen, he would  
20 recommend to the site superintendent that we have this  
21 situation and we need to separate those materials.

22 MR. JOHN GOUDY: And finally on this section, the last  
23 -- the last option from Strathroy-Lobo is that Union would  
24 over-winter topsoil prior to putting it back in place at  
25 the request of the landowner. Is that something that Union  
26 is prepared to commit to?

27 MR. PIETT: We will commit to over-wintering, you  
28 know, based on a recommendation of our consultant that is a

1   soils expert, but not at the request of the landowner.

2           And the issue there is it in the best interest of  
3   both us, the company as well as the landowner, to get the  
4   topsoil back as soon as possible.

5           However, there are times -- especially when you are  
6   pushed into late fall construction and wet weather  
7   conditions -- that it could be detrimental to the soil  
8   itself, and a number of other issues caused by water  
9   ponding over the stripped area on easement.

10          So again, we want to do the right thing, and again, we  
11   don't want to just leave it to the landowner that decides  
12   and then slows down the process of returning the land back  
13   to productivity. We would definitely use a consultant and  
14   an expert on it, and we do have examples of that, but just  
15   to leave it totally to the landowner, we want to ensure  
16   that we have input from all experts on that.

17          So we have a little more background, I think, on that  
18   that we can add to it as to...

19          MR. WESENGER: So the biggest factor we would be  
20   looking at is what is the likelihood that we can get that  
21   topsoil returned to the easement in workable conditions,  
22   right? So the saturation hasn't set in and it maintains to  
23   be workable for the balance of the clean-up period for that  
24   construction period.

25          If the soils inspector were to review the situation  
26   and look at the specific time of year and say we are too  
27   late into the fall, it doesn't look like things are going  
28   to dry up, the decision may be made to over-winter. You

1 know, the concern being if we do over-winter, of course,  
2 the soils, that easement left exposed creates -- I could  
3 describe it perhaps as a bathtub effect, where the water  
4 would collect, the snow would collect, and as it melts it  
5 takes a much longer period of time for that subsoil to dry  
6 out, because the water has sort of ponded over the  
7 easement. And then it could take much longer to get back  
8 on those lands the following spring or early summer to  
9 continue that clean-up, to finish the final clean-up on the  
10 easement lands.

11 MR. JOHN GOUDY: To the extent that the landowner has  
12 concerns about avoiding subsidence through the over-  
13 wintering of the topsoil, so the topsoil doesn't go back on  
14 until the subsoil has had the over-winter period to  
15 subside, if it's going to subside, to the extent that that  
16 is the concern of the landowner, doesn't the proposal here  
17 in the Hamilton-to-Milton LOU eliminate the landowner  
18 ability to put forward that proposal and to have it  
19 considered and implemented by Union?

20 MR. WACHSMUTH: I disagree with that, Mr. Goudy. I  
21 think what we are saying is -- I have tried to say before  
22 that this is really -- this LOU is to talk about the  
23 general practices. If a landowner has site-specific  
24 concerns, there are two or three other avenues that he has.

25 As I mentioned before, in the LOU there is schedule B,  
26 which is really at this point in time -- if you turn it up,  
27 is a blank sheet. It is to deal with the special concerns  
28 of any individual landowner, as well as we mentioned here



1 is our lands relation program. If a landowner had that,  
2 they could bring it up both to the LRA, to the person who  
3 is signing that. And again, there is our complaint  
4 tracking process, so if the landowner did not get -- if  
5 they weren't able to resolve it, that that is an escalating  
6 process right up to the senior management at Union.

7 The other thing which Union has agreed to in this case  
8 is the construction monitor, and if you look at what the  
9 objectives or the roles of the construction monitor are, it  
10 is there -- he is there as well as an asset if a person  
11 wanted that.

12 So again, the LOU is really just to talk about the  
13 general -- the normal practices. So if construction is  
14 done on a property in July, we try to put -- our preference  
15 is to put the topsoil back in August. Again, as Mr.  
16 Wesenger talked about, if the topsoil -- if we are into  
17 August or September/October, it probably will get left, but  
18 I mean, we're really there as -- is that we talk about what  
19 the general rules are, not necessarily all the site-  
20 specific or nuances that are there, and we would hope that  
21 our other processes, the complaint tracking, the issues  
22 dealing with the construction monitor, the pre-construction  
23 interviews and that, that those would resolve those issues.

24 MR. JOHN GOUDY: But without the option in the letter  
25 of understanding, the final decision is made by Union,  
26 regardless of the landowner's preference?

27 MR. WACHSMUTH: Well, I mean, there are options where  
28 he can raise it. I mean, if the construction monitor was

1 involved and he made a recommendation, I mean, that is  
2 something that would be basically going to both Union, the  
3 Board, and to GAPLO. I mean, while it may be true you  
4 would have the final say, but, I mean, if a construction  
5 monitor recommended something, it is going to have to be  
6 awfully -- Union -- it would be difficult for Union to go  
7 and say no to something that the construction monitor found  
8 acceptable.

9 MS. HARE: Can I ask a question? Is the soils  
10 consultant different from the independent environmental  
11 monitor?

12 MR. WACHSMUTH: Yes.

13 MS. HARE: So it's two separate people?

14 MR. WACHSMUTH: Traditionally we would have a person  
15 from Mr. Wesenger's firm out as a topsoil inspector, the  
16 independent firm. And again, they filed their report as  
17 part of GAPLO's evidence, was really an engineering  
18 environment form that was a different one and completely  
19 separate.

20 MS. HARE: No, but during construction you are going  
21 to have two experts? You're going to have the  
22 environmental monitor and the soils consultant? Or is that  
23 person one and the same?

24 MR. WACHSMUTH: No, they are two different people.

25 MS. HARE: Thank you.

26 MR. JOHN GOUDY: On the next section with respect to  
27 depth of cover, section 7 of the letter of understanding,  
28 this is more or less -- the new provision is more or less

1 what Strathroy-Lobo was, except that Union has removed the  
2 possibility of increasing the depth of cover over the pipe  
3 to accommodate drainage.

4 MR. WACHSMUTH: I don't think that is quite correct.  
5 You are correct that we have taken the drainage consultant  
6 out of here. What we have done is we've tried to move all  
7 of the drainage settings to the one clause, which we will  
8 come to in a few minutes here, but aspects of drainage we  
9 thought should all be in one drain in the section dealing  
10 with drainage, not spread out throughout the document.

11 That was one of the reasons why we tried to do it, was  
12 to make it more consistent.

13 MR. JOHN GOUDY: So it's Union's position, then, that  
14 it will consider adjustment to the depth of cover over the  
15 pipe to accommodate drainage within the provision that is  
16 proposed in the LOU?

17 MR. PIETT: Yes, that is correct, and you will see it  
18 in 9 of the Hamilton-to-Milton proposal. There is adequate  
19 language in there to ensure that occurs.

20 MR. JOHN GOUDY: Okay. The next item I would like to  
21 ask you about is at page 5 of the table. It has to do with  
22 the over-wintering of the topsoil. And what it appears --  
23 perhaps you can confirm -- what Union is saying is they  
24 will address subsidence where the topsoil has been over-  
25 wintered where there is subsidence greater than 4 inches,  
26 but not at 2 inches, as had been agreed in Strathroy-Lobo.

27 MR. PIETT: That is correct. The 2 inches is too  
28 restrictive, so we can put it in that category. It is just

1 not practical. I mean, normal farming practices from  
2 cultivation, ploughing, et cetera will definitely see, you  
3 know, a 2-inch differential. However, the zero to 4 inches  
4 is reasonable.

5 Again, it is also consistent if you look on the left-  
6 hand side for what is proposed in the Hamilton-to-Milton  
7 LOU. It is consistent with everything that we have  
8 addressed there. So we feel it is a very reasonable way to  
9 do it.

10 MR. JOHN GOUDY: Would you agree with me that the  
11 issue for landowners about correcting subsidence is one  
12 primarily about the mixing of subsoil and topsoil during  
13 tillage at the edges of the area of subsidence?

14 MR. PIETT: If it's over 4 inches, yes. But if it's  
15 only a 2-inch subsidence, then normal tillage would  
16 actually just in practice remove that 2-inch.

17 MR. JOHN GOUDY: But whether or not the tillage is  
18 going to affect the subsoil and mix with the topsoil is  
19 going to depend on the depth of the topsoil; isn't that  
20 correct?

21 MR. PIETT: Yes, it will, but again, it will depend on  
22 how much topsoil is there to begin with. So if a natural  
23 occurrence across a whole property is 3 inches, then  
24 there's issues already about mixing if someone is chisel --  
25 ploughing or just cultivating down past that 3-inch later.

26 However, if there is 12 inches of topsoil, that is  
27 probably a non-issue in the realms of 2 inches, and that  
28 hence why we have anything over 4 inches, yes, we will

1 definitely address that, because then there could be issues  
2 -- in addition to just the subsoil mixing, it's -- drainage  
3 is the big issue there, to ensure the proper drainage.

4 MR. JOHN GOUDY: But then if you look to the clause in  
5 the Hamilton-to-Milton LOU at the bottom of page 5, Union's  
6 already committed to correcting subsidence irrespective of  
7 the 4 inches where it causes drainage problems.

8 MR. PIETT: Absolutely. We are committed. And again,  
9 what we found over time and practice is that from zero to 4  
10 inches it does not benefit anybody to get in there and  
11 rework things or redo things.

12 But definitely anything over 4 inches, then we will  
13 repair things.

14 MR. JOHN GOUDY: And what about situations where the  
15 mixing of topsoil and subsoil might result as -- because of  
16 the depth of the topsoil on a particular property?

17 MR. WACHSMUTH: Mr. Wesenger?

18 MR. WESENGER: I think it would be very difficult to  
19 discern that 2-inch -- again, I understand your point. I  
20 think that with 4 inches, it is completely acceptable that  
21 that is a concern if the subsidence were to that point.

22 Two inches, I think it would be very, very difficult  
23 to achieve that, right? And to measure the extent of  
24 mixing that occurs. It would be very, very minimal, I  
25 would anticipate. Right?

26 MR. JOHN GOUDY: There are, Madam Chair, a few items  
27 in this table that I am just going to skip over for time's  
28 sake, and I will deal with that in --

1 MS. HARE: What does that mean, "skip over"? That you  
2 will deal with it in --

3 MR. JOHN GOUDY: I will deal with it in argument and  
4 confirm what GAPLO's position on those specific items are.

5 MS. HARE: That's fine. Mr. Smith, do you want to  
6 comment on that?

7 MR. SMITH: I will just have to see what it is, because  
8 if there is a factual-based objection that Union has, I  
9 think it's beneficial to the Board to know what that is.

10 I am not sure that it will be readily apparent simply  
11 by way of argument, so I will just have to see what my  
12 friend does.

13 MS. HARE: Okay. That's fine. Let's proceed on that  
14 basis, then.

15 MR. JOHN GOUDY: Thank you.

16 So the bottom of page 6, I don't have any questions on  
17 that particular item.

18 MS. HARE: Okay.

19 MR. JOHN GOUDY: The top of page 7, I guess the second  
20 item there is stone picking. And Union had agreed and  
21 committed to landowners in Strathroy-Lobo, and on the  
22 subsequent project, to pick stones down to 2 inches in  
23 size; is that correct?

24 MR. PIETT: Originally had agreed. But at this point,  
25 in the Hamilton-to-Milton, we have removed that.

26 Again, this one is in that category of just not  
27 practical. And again, this goes back to, I believe -- and  
28 I will ask other panel members to maybe help me with the

1 history, but we did try to attempt to do this on Strathroy-  
2 to-Lobo and not with success.

3 In fact, in the Cordner report that was written by the  
4 independent monitor in that project -- and believe it's in  
5 GAPLO's evidence, page 217 or 218, somewhere around there -  
6 - they actually said that it was too restrictive and it was  
7 not practical, and their recommendation was to be more  
8 flexible.

9 So what we have attempted to do in here is -- and  
10 basically or -- wording is that we will pick stone  
11 comparable to the adjacent land. So if the landowner has  
12 12-inch nuggets all over their property, we are not going  
13 to pick it right down to nothing just on our easement.

14 I mean, if that's what the landowner has chose to  
15 operate at, then fine. But if they pick their soil down to  
16 something which is practical like a 4-inch, then we will  
17 pick our easement down to 4-inch, and hence why we have set  
18 the minimum at 4-inch or 100 millimetres to pick on the  
19 right-of-way after our construction, and that is both on  
20 topsoil and subsoil.

21 MR. JOHN GOUDY: But you are leaving open the  
22 possibility that Union's construction could cause a  
23 situation of 2- to 4-inch sized stoniness on the  
24 construction area that doesn't exist outside of the  
25 construction area, and that will just be left as is?

26 MR. PIETT: I don't know if we can really say that.  
27 Again, how far do we want to go down? Pick pebbles?  
28 Like, we have to set a limit.

1           The common practice with the equipment to get down to  
2 this, like a 4-inch, is just about all it can do. And  
3 also, too, if you keep picking away and picking away, you  
4 are eventually going to just reduce the material there, and  
5 then you would have to truck in other material to replace  
6 all the stones you took out.

7           I'm just saying, like, if you're in a gravel pit and  
8 you have nothing but stones and you start picking, you are  
9 not going to have a gravel pit left.

10          So this is just a practical approach to it, a common  
11 approach. And again, it is a consistent approach with what  
12 we have done in many other properties, and been very  
13 successful at it.

14          And again, I will go back to it. It is included in  
15 the Brantford-Kirkwall LOU. That is more agriculturally-  
16 based than Hamilton-to-Milton, and it has been accepted by  
17 everybody.

18          MR. JOHN GOUDY: It was accepted at 2 inches in  
19 Strathroy-Lobo?

20          MR. PIETT: That is correct.

21          MR. JOHN GOUDY: But again, can you confirm that if  
22 Union's construction results in stoniness on easement that  
23 doesn't exist off easement, the landowner can expect that  
24 he or she is going to be stuck with any stones that are  
25 less than 4 inches in size, because Union is not committing  
26 to pick them?

27          MR. PIETT: What you might be starting to describe is  
28 another one of those special circumstances whereby



1 somewhere -- you know, buried 4 feet below the ground there  
2 is some kind of gravel strata, and in our work we have  
3 moved that to the top...

4 I would prefer to, again, handle that on site-  
5 specific, as Mr. Wachsmuth indicated, and work with the  
6 landowner on something like that, as opposed to carte  
7 blanche saying that we are going to pick down to 2-inch to  
8 cover a what-if that we honestly haven't seen in my history  
9 -- and help me here, but it is just like -- again, it is  
10 one of those non-practical ones, and we have tried to take  
11 a practical approach here.

12 MR. JOHN GOUDY: What about the commitment in  
13 Strathroy-Lobo to pick beyond two years after construction,  
14 where there is a demonstrable need? Is that something that  
15 Union can commit to again?

16 MS. HARE: I see that in the left-hand column it says  
17 two years after construction.

18 MR. JOHN GOUDY: Yes. But Strathroy-Lobo, in the  
19 right-hand column, the second sentence says:

20 "The company shall return in following years  
21 where there is a demonstrable need."

22 MS. HARE: So more than two years?

23 MR. JOHN GOUDY: Yes.

24 MR. WACHSMUTH: Again, that would be -- I guess, if an  
25 individual came up, we have operations people inside.  
26 Generally speaking, we would hope that after two years we  
27 wouldn't get that many coming up.

28 But if there was still a problem, the landowners do

1 have our number; they are able to call the LRA. And if it  
2 was an issue we would certainly deal with it.

3 MR. JOHN GOUDY: So Union is committing to come and  
4 pick rocks if there is a demonstrable need?

5 MR. WACHSMUTH: If the landowner identifies an issue,  
6 we will certainly deal with it, Mr. Goudy. I don't think  
7 it needs to be put in the LOU.

8 MS. HARE: What is the LRA again, please?

9 MR. WACHSMUTH: The lands relation agent, which is a  
10 person assigned to the project to deal with the first  
11 contact of all of the landowners along the length of the  
12 pipeline.

13 MS. HARE: Thank you. Mr. Smith knows I don't like  
14 acronyms.

15 MR. SMITH: I was just going to caution you that it is  
16 helpful for the transcript if we refrain from using  
17 acronyms.

18 MR. WESENGER: I was going to add just -- I can  
19 appreciate the concern with the size of rocks, and I think  
20 if a landowner or operator came and said: Look, I have a  
21 specific type of equipment that is getting harmed by these  
22 rocks up to 4 inches, Union would sit down and talk to that  
23 landowner.

24 But from my perspective, the concern being removing  
25 stones down to 2 inches is it's very difficult to achieve  
26 that. It take a lot of effort, and sometimes those  
27 mechanical rock pickers can start picking up clumps of  
28 topsoil and removing those from the easement, along with

1 the stones and the rocks.

2 In addition, when you start taking that much activity  
3 to remove the rocks, you start pulverizing that topsoil and  
4 breaking down its structure. So you are taking away the  
5 benefit, in some cases, to the topsoil itself by over-  
6 picking it or over-working the soil.

7 MR. JOHN GOUDY: The next item here is drainage  
8 tiling, and I don't actually have any questions on that.  
9 And just to give comfort to Mr. Smith, I am not going to be  
10 proposing in argument changes to that drainage tiling  
11 section, so...

12 MR. SMITH: Thank you.

13 MR. JOHN GOUDY: And unfortunately I don't think that  
14 we have the time to go through that section in any detail.  
15 It is complicated.

16 MS. HARE: I will tell you, Mr. Goudy, we will have to  
17 take a break a little shorter than our hearing plan --  
18 sorry, sooner than our hearing plan indicates, maybe in  
19 about five minutes. So maybe you could propose a suitable  
20 time to stop, and then we will resume after that.

21 MR. JOHN GOUDY: Sorry, you had said that it was going  
22 to be sooner than the break that was --

23 MS. HARE: Well, the hearing plan suggests 1:00  
24 o'clock, and we will need to break at 12:45, but we will  
25 let you continue after the break.

26 MR. JOHN GOUDY: Sure. And I am kind of at a point  
27 where I can't finish in five minutes, but I don't have a  
28 whole lot more to do after that, but if we can just go to

1 the break, I can continue after the break, so --

2 MS. HARE: Then let's go to the break now, and we will  
3 return at 1:45.

4 --- Luncheon recess taken at 12:40 p.m.

5 --- Upon resuming at 1:51 p.m.

6 MS. HARE: Please be seated. Are there any procedural  
7 matters?

8 MR. SMITH: Two minor matters, Madam Chair, that I  
9 would like to draw to your attention.

10 **PRELIMINARY MATTERS:**

11 MR. SMITH: The first follows on our discussion with  
12 respect to the settlement agreement this morning.

13 MS. HARE: Yes.

14 MR. SMITH: We are currently reaching out to parties  
15 with respect to the items we discussed. Let me just tell  
16 you with respect to the future use clause that you had  
17 identified, I can tell you what our proposal is going to  
18 be.

19 That clause in the easement is there for historic  
20 reasons, but it really isn't an -- it is applicable in the  
21 case of a smaller-diameter distribution pipeline, but it  
22 would not be the case that a 48-inch pipe would ever be  
23 above ground.

24 So we are going to propose to remove it, and we will  
25 be asking people to sign off on that. I don't expect any  
26 pushback. But that is where that is headed.

27 MS. HARE: Okay.

28 MR. SMITH: And the other matter is we have just

1 proposed some changes, and we will let you know, obviously.  
2 I expect, given the timing, it likely won't be today.

3 So if it is amenable to the Board, we would put in a  
4 letter as soon as we have confirmation, and if it is of  
5 assistance, we could do a black-lined version of the  
6 settlement agreement so you can see what the changes are  
7 for your consideration.

8 MS. HARE: That would be helpful, a black-lined  
9 version, and a clean one. Thank you.

10 MR. SMITH: The second item was a minor transcript  
11 correction that I just raised with Mr. Piett to make.  
12 Thank you.

13 MS. HARE: Okay. Mr. Piett, please?

14 MR. PIETT: Yes, during the break we had the  
15 opportunity to go back and confer, and also look at some of  
16 our history and talk to some of the people out in the  
17 field.

18 Actually I was incorrect in saying we had never used  
19 the mulch option when stripping topsoil, to differentiate  
20 it between the stripped topsoil and the existing topsoil.

21 We actually have done that before on one project, on  
22 our Sarnia industrial line, and we do have some  
23 comments that may be helpful as to whether it was effective  
24 or not.

25 Mr. Wesenger?

26 MR. SMITH: Mr. Wesenger?

27 MR. WESENGER: Yes, based on the information, the  
28 clarification with Mr. Piett, I took the opportunity to

1 contact one of my employees in Guelph, Mr. Rowland, who was  
2 the soils inspector on that project. And he did confirm  
3 that the mulch was added there.

4 I had a follow-up discussion with him about whether  
5 or not it did add value to provide a separation with  
6 the interface, and his comment was no, it didn't provide  
7 any benefit whatsoever. There was some evidence that the  
8 straw remained that was there. But the operator was quite  
9 qualified, and it didn't limit his abilities whether it was  
10 there or not.

11 MS. HARE: Okay. Thank you.

12 MR. SMITH: Thank you.

13 MS. HARE: Anything else?

14 MR. JOHN GOUDY: Madam Chair, I have -- this issue  
15 could be left to the end of my planned cross-examination,  
16 but I think I should deal with it now because it would  
17 require me to go back over a few of the items I have  
18 already asked questions on of the panel.

19 But as a result -- or on hearing some of the evidence  
20 given by the panel, I had a request from my client  
21 representatives that they be able to respond, provide  
22 evidence, their evidence in response to that.

23 As I said before, at the time that GAPLO filed its  
24 written evidence, we didn't have Union's proposed letter of  
25 understanding for this project. So GAPLO wasn't aware of  
26 the particular changes that were being proposed to the  
27 Strathroy-Lobo form of agreement.

28 So that wasn't addressed in the written evidence, and

1 couldn't be addressed at that time in the written evidence.

2       There are just, I think, three at this point --  
3 subject to anything else that comes up in cross-  
4 examination, there are just three discreet issues that they  
5 would like to respond on, and it would be over-wintering of  
6 topsoil, the addition of the mulch or straw layer, and I  
7 suspect that they may have some evidence to provide on the  
8 landowner option for approval -- sorry, landowner approval  
9 of the source of topsoil to be imported to the property.

10       That is something I haven't touched on yet in my  
11 questions, but I will be coming to that and I anticipate  
12 that that may be an area that my client's representatives  
13 would want to give evidence on.

14       And so I think I would like to make the request at  
15 this time that they be permitted to do that, so that I can  
16 then go back and ask any questions of the panel to cover  
17 off evidence that I anticipate my client's representatives  
18 giving, so that the panel has an opportunity to respond to  
19 that at this time.

20       MS. HARE: Just before I get to you, Mr. Smith, I just  
21 want to make sure I understand what you are saying.

22       We will decide now whether we allow your panel to take  
23 the stand, but you want now to go back to questions, areas  
24 that you have already pursued, or after your panel is on?

25       MR. JOHN GOUDY: No, at this time.

26       MS. HARE: At this time? Okay. Fine.

27       MR. JOHN GOUDY: There are a few points that I  
28 anticipate my client representatives giving evidence on

1 that I haven't already touched on with the panel, and I  
2 would like -- I would ask that the Board make the decision  
3 now, so that I am able to ask those additional questions in  
4 cross-examination.

5 MS. HARE: Okay. Mr. Smith, do you have any comments  
6 about the request?

7 MR. SMITH: Yes. I spoke to Mr. Goudy about this. A  
8 couple of things. I mean, the first is I don't think this  
9 is going to be an issue, so let me just get that out.

10 It's quite right that the letter of understanding was  
11 not provided, or my friend did not have it at the time his  
12 evidence was prepared. And so I understand that.

13 It was provided to my friend by me on or about  
14 February 12th, so they have had it for some time. But be  
15 that as it may, I don't have any objection to my friend  
16 calling his witnesses.

17 What I had indicated to him, and thus sort of the  
18 nature of his request, was that in fairness to these  
19 witnesses, if the GAPLO representatives are going to say  
20 something that we haven't had notice of, then it would be  
21 fair that that evidence, or what he anticipates the  
22 evidence is, be put to these witnesses so that they  
23 have a fair opportunity to comment on it. And then you  
24 will have their perspective, and then you will have the  
25 GAPLO's witnesses' representatives perspective on it.

26 So provided the matters that they intend to testify to  
27 are put to the Union witnesses, I don't have an objection.  
28 I understand their testimony to be relatively limited, so I



1 don't see it as being a big problem.

2 MS. HARE: Okay. Thank you.

3 Ms. Djurdjevic, do you have any comments?

4 MS. DJURDJEVIC: Board Staff has no objection.

5 MS. HARE: Yes, we are fine with what is being  
6 proposed.

7 **CROSS-EXAMINATION BY MR. JOHN GOUDY (cont'd):**

8 MR. JOHN GOUDY: Thank you.

9 So I will leave the items that I will come back to --  
10 I will leave those for the end, and I will just continue on  
11 from where we left off in GAPLO's proposed changes to the  
12 letter of understanding.

13 So I am back to, again, Exhibit K1.3, and at the  
14 bottom of page 11, dealing with section 11 in the Hamilton-  
15 to-Milton letter of understanding, there has been a  
16 change from Strathroy-Lobo in which Union no longer commits  
17 to ensuring that the landowner shall have access across the  
18 former trench area and easement.

19 Do you see that change that's been made from the GAPLO  
20 Union-Strathroy language?

21 MR. PIETT: We actually don't read it that way,  
22 because our paragraph 11 -- our paragraph reads:

23 "Where requested by the landowner, the company  
24 will leave plugs of access across the trench."

25 MR. JOHN GOUDY: Right. What I am asking about is the  
26 commitment in the Strathroy-Lobo form of agreement. At the  
27 end, it said:

28 "Following construction, the company shall ensure

1           that the landowner shall have access across the  
2           former trench area and easement..."

3           Not just at plug locations, but the entirety of the  
4           former trench area and easement.

5           MR. PIETT: And our paragraph reads:

6           "Following installation of the pipe and backfill,  
7           if soft ground conditions persist that prevent  
8           the landowner from crossing the trench line with  
9           farm equipment, the company will improve crossing  
10          conditions either by further replacement and/or  
11          compaction of subsoil at the previous plug  
12          locations or anywhere else. Should conditions  
13          still prevent landowner crossing the company will  
14          create a gravel base if necessary."

15          MR. JOHN GOUDY: GAPLO's issue is that it doesn't say  
16          "or anywhere else." It stops at "previous plug locations."

17          MR. PIETT: That is not an issue. That is standard  
18          practice, that we ensure that after we are finished  
19          construction all farming activities can occur again.

20          MR. JOHN GOUDY: So then it is the commitment of Union  
21          that following construction, the company shall ensure that  
22          the landowner shall have access across the former trench  
23          and easement?

24          MR. PIETT: Yes. We weren't reading it the way you  
25          were.

26          MR. JOHN GOUDY: And perhaps on the next page, page  
27          12, could you explain to me Union's rationale for no longer  
28          committing to create a gravel base on filtered fabric

1 across plugs where the landowner requests it?

2 MR. PIETT: Certainly. Again, the way this states  
3 this, it is the landowner making that request, and there is  
4 a number of other options that are available, and we have  
5 offered that up if conditions persist, but if we can do it  
6 with normal practice of backfill, compaction and returning  
7 all the material back as normal, then there is no need to  
8 go to that. And again, if you do go to that and put in  
9 gravel base and filter cloth, it does raise other issues  
10 again, removing it after the fact, and we would prefer not  
11 to jump to that conclusion if there's other methods that  
12 are available to us that we can do prior to that option.

13 MR. JOHN GOUDY: Are those other methods something  
14 that is discussed with the landowner?

15 MR. PIETT: Yeah, during, you know, pre-construction,  
16 during construction, after construction, at any point in  
17 time with our LRA, or lands relation agent, there is that  
18 opportunity to discuss this. Typically this comes when  
19 there is, like, wet conditions, and again, you get into  
20 fall cropping and want to go from one side to the other of  
21 the easement, and again, we will ensure that the landowner  
22 can get across the easement.

23 MR. JOHN GOUDY: Thank you.

24 On page 14 of the table, this is the section Roman  
25 numeral X in the Hamilton-to-Milton letter of  
26 understanding. So it's section 15, "Covenants," subsection  
27 Roman numeral X. And here Union covenants that it won't --  
28 its construction activities won't occur outside of agreed-

1 to areas without the written permission of the landowner.  
2 In Strathroy-Lobo that section also referred to operation  
3 activities.

4 Is Union prepared to commit to provide the same  
5 covenant to landowners with respect to operation  
6 activities?

7 MR. WACHSMUTH: We are prepared to do the covenant,  
8 but as I said, when we tried to revise this document we  
9 tried to really make this dealing with construction. And  
10 there are other agreements in place that deal with  
11 operation and the dig agreement, but really this is  
12 construction, so we tried to take out, where possible,  
13 anything else that didn't deal with construction.

14 So we recognize other agreements there will be in  
15 place to deal with that, and that is why we took it out of  
16 the LOU, letter of understanding.

17 MR. JOHN GOUDY: Notwithstanding that it may not fall  
18 in the letter of understanding, then, is that a commitment  
19 that Union makes with respect to its operation of the  
20 pipeline?

21 MR. WACHSMUTH: Yes.

22 MR. JOHN GOUDY: I am skipping over the language at  
23 the bottom of page 14 with respect to the importation of  
24 topsoil. That's on the basis that we won't be raising that  
25 in argument.

26 Mr. Wachsmuth, on page 16, adjacent to the covenant  
27 respecting the integrity dig agreement, I take it that your  
28 last response about restricting this document to

1 construction is the answer to why that language was taken  
2 out?

3 MR. WACHSMUTH: Yes, that is correct.

4 MR. JOHN GOUDY: But can you also confirm that the  
5 language that was taken out from the Strathroy-Lobo  
6 agreement is something that Union is committed to outside  
7 of this letter of understanding?

8 MR. WACHSMUTH: I think that that is all covered off  
9 in the dig agreement, sir, and that was filed as part of  
10 your evidence.

11 MR. JOHN GOUDY: Thank you.

12 At the bottom of page 16, what has been removed from  
13 the Strathroy-Lobo form of letter of understanding with  
14 respect to imported topsoil is the previous requirement  
15 that the topsoil be from a source approved by the  
16 landowner. Is that something that Union is prepared to  
17 commit to putting back into the letter of understanding?

18 MR. PIETT: No, we are not. Again, the reason being  
19 here is, again, we want to rely on our specialists that  
20 have actually analyzed the topsoil to ensure that it is  
21 appropriate to bring back on that property to be consistent  
22 with the existing topsoil, and we can't, in a general term,  
23 just leave that to the landowners to always make that  
24 decision. We want to ensure that we consult with --  
25 consult with the landowner as to what they think, but we  
26 want the decision to be left with -- based on -- or based  
27 on the recommendation of our consultant, who will do a  
28 number of different analyses to that soil before we will

1 bring it on so that we do not impact any kind of  
2 productivity or the quality of the soil that is on that  
3 property.

4 MR. JOHN GOUDY: But isn't the clause as it was stated  
5 in Strathroy-Lobo with the additional language at the end  
6 of the statement -- doesn't that create a situation where  
7 it is Union's consultant that is choosing, selecting and  
8 proposing the topsoil that is to be imported, but that  
9 selection is subject to the approval of the landowner?

10 MR. PIETT: I don't have that wording right here to  
11 refer to --

12 MR. JOHN GOUDY: If you look at the table, the wording  
13 that is in the Hamilton-to-Milton letter of understanding  
14 is:

15 "Any imported topsoil shall be natural, free of  
16 soybean cyst nematode, and shall have attributes  
17 consistent with the topsoil of adjacent lands as  
18 determined by the company's consultant."

19 The additional language that has been removed and that  
20 GAPLO is proposing be added back in is that "and be from a  
21 source approved by the landowner."

22 Does that not -- I mean, that's what was in the  
23 Strathroy-Lobo agreement that Union used. Is that not a  
24 process whereby Union's consultant selects the soil subject  
25 only to the approval by the landowner?

26 MR. PIETT: If we were to read it that way -- however,  
27 again, we weren't -- it could be, except that it offers up  
28 - there's other issues here, that if the landowner was to

1 not accept what our consultant said, then where are we  
2 going? I mean, we do need to find the proper topsoil to  
3 bring back, so again, maybe this is just editorial and just  
4 understanding what the intent was of the original document,  
5 but that in itself is -- I mean, if we have a specialist  
6 pick the soil, then I am sure the landowner should agree to  
7 one of those, but if they don't, where are we? We have to  
8 bring soil in, and we have to replace it.

9 So I would prefer to stay with our wording, which I  
10 think protects the landowner, because, again, through  
11 everything else, we've been very clear that we consult with  
12 the landowner through all of this, and this is no  
13 exception.

14 MR. JOHN GOUDY: But at the end of the day that sets  
15 up the situation where if, for whatever -- the landowner is  
16 -- has reasonable problems, reasonable concerns about the  
17 topsoil that's been selected by Union's consultant, the  
18 landowner is obligated to accept that soil onto his or her  
19 property without any recourse.

20 MR. VADLJA: Mr. Goudy, from a practical perspective,  
21 we would work with the landowner to ensure that they are  
22 comfortable with the topsoil we are bringing onto their  
23 property. It is their property and they will need to work  
24 that topsoil in the future. We will want to make sure that  
25 topsoil is adequate for their purposes.

26 So the company consultant would judge the merit of  
27 that topsoil, make sure it is appropriate for that  
28 property, discuss that with the landowner, and we would

1 hope that the landowner would be in agreement with that.

2 MR. WACHSMUTH: As well, Mr. Goudy, I think if you  
3 look in our complaint tracking program, where if the  
4 landowner did have issues with it, we do have processes in  
5 place where that complaint can be escalated up through the  
6 engineering, up to a vice president or senior management  
7 level, if there are complaints.

8 As well on this project, we are proposing to have an  
9 independent monitor who would be able to have an opinion on  
10 what this is.

11 MR. JOHN GOUDY: If there is not a commitment to have  
12 the source of the topsoil approved by the landowner, then  
13 what -- what is there to say that the landowner is going to  
14 be informed of the source of the topsoil that is being  
15 imported?

16 I mean, the landowner may have concerns, but the  
17 landowner is not going to be in a position to express any  
18 concern if he or she doesn't -- isn't told where the  
19 topsoil is coming from.

20 MR. VADLJA: Perhaps the commitment that could be made  
21 then is to ensure that that consultant -- that that  
22 discussion does happen within the landowner. So if there  
23 is topsoil being brought onto a landowner's property, the  
24 commitment that could be made is that the landowner is  
25 informed about -- that a discussion around the quality of  
26 that topsoil takes place with the landowner prior to that  
27 topsoil being brought to site.

28 MR. JOHN GOUDY: The quality and the source?



1 MR. VADLJA: The quality and the source.

2 MR. JOHN GOUDY: On page 17 in the dispute resolution  
3 section -- I won't be asking any questions on that topsoil  
4 importation. That is linked to the previous section that I  
5 had passed over.

6 On page 18 under section 17, "Land rights and  
7 easements," Union in this document agrees that it:

8 "... will not surrender or be released from any  
9 of its obligations under an easement for this  
10 project without the consent of the landowner."

11 In Strathroy-Lobo, the language was slightly  
12 different; it was:

13 "... will not surrender or be released from any  
14 of its obligations in the easement lands."

15 So GAPLO's question is whether Union is prepared to  
16 commit that it won't surrender or be released from  
17 any of its obligations in the letter of understanding  
18 without the consent of the landowner.

19 MR. SMITH: Sorry, Mr. Goudy, I may have  
20 misunderstood. Are you asking that the language on the  
21 right-hand side be included, or something different?

22 MR. JOHN GOUDY: GAPLO's position is that the language  
23 on the right-hand side did cover the letter of  
24 understanding, and that that was the purpose of that  
25 language.

26 It's been removed, and so I guess either will Union  
27 commit to restoring that language, or alternatively, will  
28 Union commit that it will not surrender or be released from

1 any of its obligations under the letter of understanding  
2 without the consent of the landowner?

3 MS. HARE: Perhaps the witnesses are having the same  
4 problem that I am. I don't see the difference between one  
5 column and the other column.

6 MR. JOHN GOUDY: Madam Chair, in the new agreement,  
7 its obligations under an easement for this project with  
8 reference to the easement agreement.

9 MS. HARE: Right.

10 MR. JOHN GOUDY: It is more general in the Strathroy-  
11 Lobo form, which was its obligations in the easement lands,  
12 which may extend beyond the easement agreement.

13 There are obligations that Union has undertaken on the  
14 easement lands, including the construction obligations.

15 MR. WACHSMUTH: I am afraid this is something the  
16 lawyers might have to deal with, because we just can't, I  
17 am sorry.

18 MR. JOHN GOUDY: I will move on. The next item is on  
19 page 23 and it takes us back briefly to the question of  
20 abandonment.

21 There was an additional provision in the Strathroy-  
22 Lobo agreement that said that:

23 "The company, in consultation with the landowner  
24 or third parties as required, will determine a  
25 reasonable and appropriate course of action to  
26 rectify any deficiencies."

27 Is that something that Union is prepared to commit to  
28 for this project?

1           MR. WACHSMUTH: I think Mr. Walker talked this morning  
2 about the fact that abandonment plans would be prepared,  
3 and my understanding is that those abandonment plans would  
4 be comprehensive and that these things would be covered  
5 again in that future agreement and plan.

6           MR. JOHN GOUDY: What is the future agreement?

7           MR. WACHSMUTH: Or future plan, sorry.

8           MR. JOHN GOUDY: But the future plan isn't going to be  
9 an agreement between Union and the landowner?

10          MR. WACHSMUTH: There could be agreements in place if  
11 we needed additional temporary lands in order to do the  
12 abandonment, if we were pulling it out. That's just - it  
13 would be part of any future plan, Mr. Goudy.

14          MR. JOHN GOUDY: But at the present time, Union is not  
15 prepared to commit to rectifying deficiencies from pipeline  
16 abandonment?

17          MR. WACHSMUTH: I think our easement agreement  
18 requires us to do that, sir.

19          MR. PIETT: And to add on that, our wording in the  
20 Hamilton-to-Milton specifically says:

21                 "Upon abandonment, the pipeline..."

22          Sorry, too fast? In the wording of the Hamilton-to-  
23 Milton:

24                 "We will return as close as possible to its prior  
25 use and condition, with no ascertainable changes  
26 in appearance or productivity, as determined by a  
27 comparison of the crop yields, with adjacent  
28 lands..."

1 Et cetera.

2 So I think it's all covered and it is in there. The  
3 fact that we're just not going to accept your wording, we  
4 believe, as stated before, that we have tried to make this  
5 simpler, cleaner, more understandable and straightforward.

6 So I think both the landowners and Union Gas are  
7 covered in that respect.

8 MR. JOHN GOUDY: The language that's in the right-  
9 hand column was language that was part of the clause that  
10 appears in the left-hand column originally, and it has been  
11 removed by Union Gas.

12 If what you are telling me is that the intention --  
13 Union's intention -- its commitment is the same as it was  
14 before, with or without that language, then tell me that.  
15 If there is a change in intention, tell me that.

16 MR. SMITH: Well, I think it is very clear that the  
17 company's obligation is as specified in the left-hand side,  
18 to return the lands as close as possible to its prior use  
19 and condition with no ascertainable change.

20 So I think the company's position is we were not  
21 attempting a substantive change to the wording.

22 MS. FRY: Wording aside, could you also tell us about  
23 your view of the operational implications?

24 MR. PIETT: Could you actually clarify what you are  
25 looking for, as far as the operational implication of  
26 abandonment?

27 MS. FRY: Okay. From the point of view of what you  
28 would do operationally under the clause in the left-hand

1 column versus the proposal to add the right-hand column,  
2 what would the difference be to your operations, if any,  
3 between the two scenarios?

4 MR. PIETT: Absolutely nothing.

5 MS. FRY: Thank you.

6 MR. JOHN GOUDY: The last item is on the last page,  
7 page 26. It's the last item I will deal with before going  
8 back to some of the soils issues.

9 And can you agree with me that the penalty provision  
10 that appears on the right-hand column, that is something  
11 that was developed as part of the integrity dig agreement  
12 originally?

13 MR. WACHSMUTH: It is part of the integrity dig  
14 agreement, along with some other for working early or late  
15 in the year.

16 MR. JOHN GOUDY: And that integrity dig agreement, as  
17 we saw before, applies to the Hamilton-to-Milton section;  
18 correct?

19 MR. WACHSMUTH: That is correct.

20 MR. JOHN GOUDY: And would you agree with me that the  
21 purpose of this penalty provision that was in the  
22 Strathroy-Lobo agreement but has been removed for Hamilton-  
23 to-Milton, the purpose was to deter or to act as a  
24 deterrent to working in wet soil conditions?

25 MR. WACHSMUTH: Again, that paragraph was added as  
26 part of a comprehensive agreement that was reached between  
27 the landowner committee and Union.

28 MR. JOHN GOUDY: It was part of Strathroy-Lobo --

1 MR. WACHSMUTH: It was part of the comprehensive  
2 agreement that was settled between the two parties.

3 MR. JOHN GOUDY: And it is part of the integrity dig  
4 agreement?

5 MR. WACHSMUTH: That's correct.

6 MR. JOHN GOUDY: And the integrity dig agreement  
7 applies to the Hamilton-to-Milton section?

8 MR. WACHSMUTH: When integrity work is being done.

9 MR. JOHN GOUDY: Right. But what Union's proposed  
10 letter of understanding does is to remove that as part of  
11 the construction phase.

12 MR. WACHSMUTH: That is correct.

13 MR. JOHN GOUDY: But I take it that it is still  
14 Union's position that working in wet soil conditions should  
15 be avoided?

16 MR. PIETT: Absolutely, and hence why we have our wet  
17 weather shutdown clause that has been referred to in this -  
18 - these documents and hearing.

19 However, the one caveat on that is that at certain  
20 times, especially if we get pushed into fall weather and  
21 wet weather, we may have to work there and therefore take  
22 other mitigation measures to protect the soil, such as  
23 over-wintering the soil, and then also there is the damages  
24 as well that may be caused that we would want to avoid, but  
25 that could occur.

26 MR. JOHN GOUDY: A penalty provision like this would  
27 serve as a deterrent to working in wet soil conditions?

28 MR. PIETT: I think this is a compensation issue. We

1 don't look at it as a penalty. I mean, we are going to  
2 build the right way under the right conditions, as we have  
3 stated, through everything else. I don't look at this  
4 clause and say: Ooh, that is a penalty. You know, I  
5 should not do this, because it is going to be this kind of  
6 a cost. We are going to do the right thing and minimize  
7 costs for everybody under any condition.

8 MR. JOHN GOUDY: I am now going to go back to, I  
9 guess, three -- two -- two different soils issues that we  
10 dealt with earlier in my questions. And forgive me if I go  
11 over the same -- some of the same items before. I want to  
12 make sure that you have had an opportunity to speak to  
13 these two items fully.

14 So the first -- the first item is the over-wintering  
15 of topsoil. And my recollection of your evidence from  
16 earlier is that Union's preference is not to over-winter  
17 topsoil where topsoil can be replaced in the year of  
18 construction under appropriate soil conditions.

19 MR. PIETT: That is correct.

20 MR. JOHN GOUDY: And has it been Union's experience in  
21 any projects that the over-wintering of topsoil is a better  
22 option than replacement in the year of construction, even  
23 where soil conditions are appropriate?

24 MR. VADLJA: Our experience is that it's best to  
25 return that soil in the year of construction when the  
26 conditions are suitable. We have undertaken a number of  
27 soil and crop studies to confirm that. Our results are  
28 such that we are getting good returns to crop yield after a

1 number of years post-construction.

2 So, I mean, that's -- in our view that is the right  
3 approach to take on topsoil and returning topsoil.

4 MR. WESENGER: If I can add to that response, when you  
5 do over-winter it, it will add an entire additional year on  
6 to the clean-up, so in a normal construction program when  
7 you do the year of construction, obviously that year the  
8 field is out of production for the landowner. The year  
9 after they do the spring clean-up. This would delay that.  
10 There would be the year after -- the clean-up would be  
11 delayed for a year, and then the following year after it  
12 would be another year, so we would be talking about three  
13 years where that landowner would have Union Gas on their  
14 property.

15 My experience has been in -- through public  
16 consultation, talking to landowners, is that certainly it  
17 is an inconvenience to have the operator or Union Gas there  
18 doing the construction. We want to get this over with as  
19 soon as we can, right?

20 So by not over-wintering when conditions allow and you  
21 put in the proper mitigation measures, that landowner is  
22 whole or gets his property back completely for his  
23 operation a year ahead of time, versus the proposal of  
24 over-wintering.

25 MR. JOHN GOUDY: Mr. Wesenger, you do understand that  
26 GAPLO's position is that the landowner should have the  
27 option of requiring over-wintering, not that it be done in  
28 all cases where -- including where the landowner doesn't



1 want over-wintering.

2 MR. WESENGER: I understand that, yes.

3 MR. JOHN GOUDY: So if it was the landowner's option  
4 to choose over-wintering, then that would deal with the  
5 concern that you just raised that the landowner might want  
6 to have it put back together the year of construction.

7 MR. WESENGER: Yes, if it were the landowner's option.  
8 It is not my -- you know, that is an area where Union Gas  
9 has to comment on the letter of understanding and the  
10 implications of that.

11 My concern, I guess, would be -- I understand what you  
12 are saying but, you know, the landowner is obviously making  
13 a decision there to extend the presence of that operation  
14 of the pipeline construction on the property for an  
15 additional year.

16 MR. JOHN GOUDY: And would you agree with me that  
17 there may be environmental, soil-related reasons why the  
18 landowner would be prepared to accept an extended stay for  
19 Union on the property in exchange for over-wintering the  
20 topsoil?

21 MR. WESENGER: I don't know that I have the  
22 information to agree with that statement. We have done  
23 several soil and crop yield monitoring programs for Union  
24 Gas and other utilities in the province. I don't think we  
25 have specific instances where we have selected properties  
26 to monitor where the over-wintering has been implemented  
27 where we would look at the one, three and five years after  
28 to see what the yields returning on those lands are.

1           Certainly since the 1970s the yields have improved  
2 significantly on properties, certainly the trenches where  
3 the most significant impacts are, but crop yields have  
4 returned on average close to 90 percent across the entire  
5 easement now.

6           So I am not sure what the significant difference would  
7 be in the -- you know, if we over-wintered, you know, if  
8 you would get a 1 to 2 percent increase. I can't confirm  
9 that.

10          MR. JOHN GOUDY: Would you agree with me that  
11 landowners may have concerns about the soil conditions that  
12 go beyond simply crop yield in the future that relate to  
13 the over-wintering of topsoil versus replacing it in the  
14 year of construction?

15          MR. WESENGER: Not that they have conveyed through the  
16 forums where I have had the discussions with them. Right?

17          MR. JOHN GOUDY: So there haven't been -- you are not  
18 aware of any benefits that may arise from over-wintering  
19 with respect to soil erosion?

20          MR. WESENGER: The concern I would have with over-  
21 wintering and soil erosion would be the topsoil potentially  
22 in those piles eroding away.

23          MR. JOHN GOUDY: What if the topsoil is covered by a  
24 cover crop that is established in the year of construction?

25          MR. WESENGER: Certainly that would stabilize it.

26          MR. JOHN GOUDY: Isn't that Union's practice?

27          MR. VADLJA: No, that -- if I interpret your question  
28 correctly, I think you said: Is our practice to put a

1 cover crop on a topsoil pile that's been stripped?

2 MR. JOHN GOUDY: Where over-wintering is to be  
3 undertaken.

4 Where the topsoil is to be over-wintered, is it not  
5 Union's practice to put a cover crop on the topsoil pile?

6 MR. VADLJA: Not that I am aware of, no. I am not  
7 sure how you would go about doing that.

8 MR. WESENGER: I think the challenge or the difficulty  
9 would be, depending on the timing of when that decision was  
10 made to over-winter the topsoil, is if you were to put a  
11 cover crop on the topsoil pile, could it in fact have time  
12 to germinate before the winter set in to actually achieve  
13 what you are trying to achieve with a cover crop.

14 It all depends on the timing of when that decision was  
15 made.

16 MR. JOHN GOUDY: Okay. One of the comments made  
17 earlier was that over-wintering topsoil, leaving the  
18 topsoil stripped over the winter, creates a bathtub  
19 scenario on the stripped area that would fill with water.

20 Was that part of your evidence before?

21 MR. WESENGER: Correct. Basically the accumulation of  
22 snow sitting in that.

23 MR. JOHN GOUDY: Is that not something -- is water on  
24 the construction area not something that is addressed  
25 through pre-construction tiling that Union undertakes?

26 MR. PIETT: Pre-construction tiling addresses normal  
27 drainage and when you have stripped topsoil in piles, that  
28 is not normal drainage.

1           So no, we would have actually have to come out and  
2 actually put pumps to get the water out of there. In fact,  
3 what you have is your topsoil drops down to where your  
4 subsoil is, and then you have topsoil over here.

5           Anyway, it will depend on the area, because if the  
6 whole easement is going downhill, obviously the water is  
7 going to go down the easement and it's not going to have  
8 that bathtub effect in areas that are flat.

9           It is just an accumulation of water. If there's no  
10 way for it to get out other than normal drainage, it will  
11 stay there. The only way it's going to leave is either by  
12 natural drainage down to existing tile or through the  
13 trench some way, or to evaporate. So it just takes longer.

14          Once you can get your topsoil back there, once you can  
15 complete all our header tiles that we commit to doing  
16 either before construction or after construction, and we  
17 get the land back to normal and get the drainage repaired,  
18 then you won't have those issues.

19          And that is what we are just trying to the highlight.  
20 As long as the topsoil is off, there are other issues  
21 and they are negative to us trying to get the land back to  
22 the original condition that it was in prior to the  
23 construction.

24          MR. JOHN GOUDY: Hasn't it been the experience of some  
25 landowners that -- and has it been Union's experience in  
26 some cases that topsoil that is replaced in the year of  
27 construction is loose and susceptible to erosion?

28          MR. VADLJA: My response would be no. I mean, I think

1 you are talking about a situation where you have returned  
2 topsoil in the late summer or early fall, and you have got  
3 a heavy period of rain -- and you are suggesting that  
4 perhaps there is some soil that is going to be lost?

5 MR. JOHN GOUDY: Or that it is not possible even to  
6 conduct agricultural activities over the area because the  
7 ground is so loose. It hasn't settled properly because it  
8 wasn't given the opportunity to settle.

9 MR. VADLJA: That is not my experience. That is not  
10 my understanding, no.

11 MR. JOHN GOUDY: Is it -- perhaps Mr. Wachsmuth or Mr.  
12 Piett have a recollection that over-wintering of topsoil  
13 was something that Union started to do in or about 1990 on  
14 the main transmission line in the London area.

15 MR. WACHSMUTH: I believe it was done on some projects  
16 before the Lobo-Beachville project, but that is subject to  
17 check. But I believe it was done before that as well.

18 MR. JOHN GOUDY: Was there a time when over-wintering  
19 was not done?

20 MR. WACHSMUTH: I honestly -- yes, probably for the  
21 26-inch pipeline in 1957, but I just don't know.

22 MR. PIETT: As we've stated before, the common  
23 practice is to return all the topsoil to its original  
24 location and get the land back to its original state. And  
25 only at times where we were pushed into the fall wet  
26 weather and could not do it appropriately, as we described  
27 earlier, would we have left it to be over-wintered.

28 MR. JOHN GOUDY: But you have given the landowner the

1 option to choose over-wintering previously?

2 MR. PIETT: We don't have any recollection of those  
3 issues. And just - apologies -- we would have to go back  
4 into our records to see where we did or we didn't.

5 MR. JOHN GOUDY: That was the case on the Strathroy-  
6 Lobo project?

7 MR. WACHSMUTH: It was an option available to the  
8 landowner, yes.

9 MR. JOHN GOUDY: And in that subsequent project,  
10 EB-2007-0633 -- we reviewed it earlier -- where the same  
11 letter of understanding was used?

12 MR. WACHSMUTH: That's correct.

13 MR. JOHN GOUDY: Would you agree with me that over-  
14 wintering the topsoil significantly reduces the incidence  
15 of crowns over the trench that may exist after topsoil  
16 replacement?

17 MR. PIETT: I would not describe it as  
18 "significantly." The one advantage to over-wintering is,  
19 yes, you can see your trench line in the subsoil. So if  
20 there was some kind of settlement that was not  
21 appropriately looked after in the previous season, yes,  
22 you would see it, and yes, you would put it back to the  
23 proper level before bringing your topsoil back.

24 But again, for the projects we do, they are typically,  
25 you know, 15 to 20 kilometres long; it's not significant.

26 MR. JOHN GOUDY: And you have confirmed to me that  
27 Union's preference is not to over-winter topsoil unless  
28 soil conditions require it?

1 MR. PIETT: That is correct, in wet weather conditions  
2 near the end of the year.

3 MR. JOHN GOUDY: And so can landowners expect that  
4 Union's soil consultant is not likely to propose over-  
5 wintering of topsoil where the soil conditions are  
6 acceptable in the year of construction?

7 MR. WESENGER: That's been the practice. The soils  
8 consultant is a soil scientist. He is professional  
9 agrologist, and he is bound by a code of ethics. He is not  
10 going to make any recommendation that is going to  
11 negatively impact the agricultural soils.

12 MR. JOHN GOUDY: Those are my questions, Madam Chair.

13 MS. HARE: Thank you.

14 MR. JOHN GOUDY: Oh, sorry, those are not quite all my  
15 questions. I do have a few more, sorry. I forgot I have  
16 one other issue. It's the straw layer.

17 I think the evidence that we heard just after the  
18 lunch break was that in the one situation that Union  
19 recalls where a straw mulch layer was used between the  
20 virgin topsoil and the stored topsoil pole, the stripped  
21 topsoil, it was your evidence that the straw did not  
22 deteriorate, that the straw was still there as a  
23 separation.

24 MR. WESENGER: It was -- you could still tell it was  
25 straw. It is my understanding it had begun to decompose.  
26 I didn't ask how long the topsoil had been stored off  
27 easement, how long it had -- so I didn't have that  
28 information from the employee that I spoke with. But you

1 are correct, yes.

2 MR. JOHN GOUDY: And there was also evidence earlier  
3 that there could be properties where there is only 3 inches  
4 of topsoil?

5 MR. PIETT: That was a general statement to say that  
6 there is topsoil variability across all properties. I  
7 mean, we deal with whatever we come across.

8 MR. JOHN GOUDY: Can you agree with me that if you  
9 were in a location where there is only 3 inches of topsoil,  
10 there is not a lot to work with, and Union would have to do  
11 what it could to prevent the disturbance of the virgin  
12 topsoil adjacent to the work area?

13 MR. PIETT: Yes, that is correct. And to leave the  
14 virgin there and to bring back the topsoil that we had  
15 stripped into its original location, yes, that is correct,  
16 so that we are consistently 3 inches across the property  
17 you are talking about.

18 MR. JOHN GOUDY: Because when you are moving the  
19 stripped topsoil pile, any error there, there is not a lot  
20 of allowance if there is only 3 inches of topsoil.

21 MR. WESENGER: Yes, that would be an extremely shallow  
22 depth of topsoil. So it would be extremely important,  
23 right, to be -- use caution when stripping, when you remove  
24 the topsoil for sure, if your -- if the interface between  
25 the topsoil layer and the subsoil layer, if there is only 3  
26 inches. As I had mentioned previously, all those  
27 activities are monitored by the soils inspector. The  
28 concern here would be bringing back too much and removing



1 some of the soil from off easement onto the easement lands,  
2 so scalping some topsoil from off easement and bringing it  
3 on easement.

4 With an experienced operator, I don't think that would  
5 be too difficult to achieve on the layer between that where  
6 the fluffy topsoil that has been removed and mounded off  
7 easement, where that interface is between the virgin  
8 topsoil.

9 A skilled operator who is on a pipeline construction  
10 job would be able to do that without the aid of the mulch.  
11 Would the mulch help? In that situation if there is only 3  
12 inches of topsoil to salvage in the first place, it likely  
13 would be a benefit, I would think, just to assure that we  
14 aren't going to take too much topsoil. It isn't absolutely  
15 essential or necessary.

16 MR. JOHN GOUDY: The mulch layer would also assist in  
17 preventing the sticking together of the stripped soil and  
18 the virgin soil, wouldn't it?

19 MR. WESENGER: Depends on how much mulch you put down.

20 MR. JOHN GOUDY: And you were referring to the  
21 contractors or the construction -- the operators of the  
22 equipment that strip topsoil and move soil. You can't say  
23 that all of the contractors that are going to be on Union  
24 Gas's work site are sufficiently experienced not to cause  
25 damage.

26 MR. WESENGER: I think if they are in the role of  
27 stripping topsoil and operating a D-6 or D-8 or a D-10,  
28 they're highly qualified and skilled operators on a

1 pipeline construction job. It is certainly one of the most  
2 sensitive areas in pipeline construction. They are  
3 monitored by the soils inspector to ensure they are doing  
4 it properly. If they are not doing it properly, if they  
5 aren't qualified, that is quickly reported to the site  
6 superintendent, and that operator would be replaced, is my  
7 understanding, as unqualified to do that job.

8 MR. JOHN GOUDY: Adding the mulch layer would help to  
9 -- as a buffer or a protection against the error of the  
10 operator; correct?

11 MR. WESENGER: With the assumption the operator is  
12 going to make an error, yes.

13 MR. JOHN GOUDY: Well, it is Union's assumption that  
14 the operator is not going to make an error, right? That is  
15 what your evidence is?

16 MR. WESENGER: Correct.

17 MR. JOHN GOUDY: Right, but from the landowner  
18 perspective it is reasonable for the landowner to wonder  
19 whether the operator might make a mistake; I take it you  
20 would agree with that?

21 MR. PIETT: Hence why we have topsoil inspectors out  
22 there, to ensure that we are doing it as we have committed  
23 to. No guarantees in life. I mean, that's -- it is a big  
24 activity and we have a lot of things to look after, and  
25 that is why we do it in concert with our contractors, well-  
26 qualified contractors. We work with good, qualified people  
27 on the site as well, and, you know, we do everything  
28 possible.

1 I mean, you could go to the Nth degree and say we are  
2 going to lay down terra carpet. We could lay down planks  
3 of wood. We could lay down everything to differentiate  
4 between the stripped topsoil and the original virgin  
5 topsoil, but is that going to give any better job at the  
6 end of the day? Our belief is no, it's not, that through  
7 qualified operators, topsoil inspectors, and the processes  
8 that we have in place, we will do that appropriately. And  
9 again, we will work with landowners so that they can  
10 understand that.

11 If there is a site-specific -- i.e., someone has some  
12 unique soil that has to be handled in some unique way and  
13 that can be demonstrated to us, and we would bring in a  
14 specialist to confer with them on that, then -- again, as  
15 we have described many times -- there is that opportunity  
16 for a landowner to state that, and we have got places where  
17 we track it and make sure that we handle it appropriately,  
18 but to again go to a general statement that is going to be  
19 right across, broad-brush across everything, no, we don't  
20 agree with that.

21 MR. JOHN GOUDY: Well, again, I think that the  
22 proposal that Union -- or sorry, that GAPLO has put forward  
23 is that the mulch layer would be provided at the request of  
24 the landowner, not across the board but at the request of  
25 the landowner.

26 MR. PIETT: The way this reads is that any landowner  
27 that requests it, then we are doing it.

28 MR. JOHN GOUDY: Yes, but it is not -- that is not an

1 across-the-board on all construction sites.

2 MR. PIETT: It could be.

3 MR. JOHN GOUDY: Could be.

4 MR. PIETT: It could be. So all we are saying is that  
5 in practice -- it is not practical, so I will put it in  
6 that "not practical" bucket -- and we do have ways of  
7 ensuring that topsoil is stored properly and returned  
8 properly.

9 MR. JOHN GOUDY: Those are all my questions, Madam  
10 Chair.

11 MS. HARE: Thank you.

12 Questions from Board Staff?

13 **QUESTIONS BY MS. DJURDJEVIC:**

14 MS. DJURDJEVIC: Thank you, panel. We just have just  
15 a couple questions.

16 With respect to Issue No. 7, whether the form of  
17 easement agreement is appropriate, we have filed in GAPLO's  
18 evidence -- and I am going to have that. There it is on  
19 the screen. It is GAPLO's evidence, page 40, attachment 3.

20 Just would like the panel to confirm that this is the  
21 form of easement agreement that the Board approved in EB-  
22 2005-0550. That is the Strathroy-Lobo case. Do I have  
23 that correct?

24 MR. WACHSMUTH: One moment, please.

25 MS. DJURDJEVIC: Okay. Scroll down a bit, sorry.  
26 Keep going. A little bit further, to the section that is  
27 highlighted and -- so... You should have it on the -- oh.  
28 Well, now we have gone down.

1 MR. WACHSMUTH: I am sorry I took so long. Could you  
2 please repeat your question? I wanted to bring up the  
3 easement agreement.

4 MS. DJURDJEVIC: I just ask you to look at the  
5 document, GAPLO's evidence, page 40. This is the easement  
6 for transmission pipeline, and I would like you to confirm  
7 that this is the form of easement agreement that was used  
8 in the EB-2005 case, the Strathroy-Lobo case, and that this  
9 is the form of agreement that the Board approved.

10 And my assumption is that it is, is because in GAPLO's  
11 evidence on page 2, paragraph 5, footnote number 3 --

12 MR. WACHSMUTH: I believe this is the easement that  
13 was approved in Strathroy-Lobo.

14 MS. DJURDJEVIC: Thank you. We are quite sure it is  
15 as well, but we needed to confirm that.

16 Now, if we go forward to GAPLO's evidence, page 47,  
17 also an easement agreement, and the same question. This is  
18 the easement agreement that was provided in the EB-2007-  
19 0633 case. That is the Dawn deliverability case. This is  
20 the form of easement agreement, as I understand it, that  
21 was provided to landowners and that was approved by the  
22 Board?

23 MR. WACHSMUTH: That is my understanding.

24 MS. DJURDJEVIC: Okay. And in both of these cases,  
25 that 2005/2007 case, paragraph 1 has the language that  
26 GAPLO is requesting in this proceeding?

27 MR. WACHSMUTH: That is correct.

28 MS. DJURDJEVIC: And so my question -- we heard

1 evidence this morning about why the letter of understanding  
2 was revised after 2005/'07 as part of a comprehensive  
3 overhaul of that particular document.

4 But could you please clarify what has changed since  
5 the 2005 and 2007 cases that explains why Union is  
6 moving away from the clause that it agreed to in the  
7 easement agreement -- different document now -- since the  
8 2005-'07 cases?

9 MR. WACHSMUTH: I can start with this, but again,  
10 Mr. Walker will probably continue.

11 What we have heard a lot is about a couple of clauses.  
12 We talked about the future use clause and also talked about  
13 this abandonment clause.

14 But the easement agreement also went under a review,  
15 and there were some other changes made to it that haven't  
16 been talked about today. So both documents actually went  
17 through a review.

18 I mean, another example is that there is an HST  
19 clause, if you look at the agreement that we are asking the  
20 Board to approve, and there is some stuff dealing with  
21 postponement for mortgages.

22 So both documents went through a review and one of the  
23 clauses that we -- you are right, we did take out the  
24 future use, which has gone back in in a different format,  
25 and the abandonment clause which has come out.

26 And some of the reasons that the abandonment clause  
27 has come out, I will let Mr. Walker talk about.

28 MR. WALKER: Yes, as we talked about earlier with the

1 abandonment clause, it's really that development of the  
2 codes and technical papers have put us in a position where  
3 we would want to evaluate the abandonment at the time of  
4 abandonment, to the codes and regulations that are in place  
5 at that time, and do site-specific assessments for each  
6 section of pipe.

7 As I mentioned earlier, sometimes that results in a  
8 case where we may want to remove some pipe, and sometimes  
9 that may result where we may want to the abandon in place.

10 Until you do that evaluation, you can't kind of  
11 presuppose what we would do.

12 MS. DJURDJEVIC: And just one more question on these  
13 easement agreements, these agreements that we just looked  
14 at.

15 Is that the wording of the easement agreement that was  
16 originally offered to landowners in 2005 and 2007, or was  
17 that as a result of settlement? Or do you know what the  
18 answer is to that?

19 MR. WACHSMUTH: The easement agreement, which can be  
20 found at page 40 of GAPLO's prefiled evidence, attachment  
21 3, was the result of a comprehensive settlement.

22 MS. DJURDJEVIC: Okay. So what was the original form  
23 that was offered before settlement?

24 MR. WACHSMUTH: In its simplest form, I don't believe  
25 it had anything that was highlighted in the document that  
26 is attachment 3 of GAPLO's evidence.

27 MS. DJURDJEVIC: Okay. Thank you. Those are all the  
28 questions I have on that point. I have a couple of

1 questions about abandonment methods.

2 We have heard that there are two methods; one is when  
3 a pipeline is deemed to be out of service, one is an in  
4 place abandonment which involves leaving it in the right-  
5 of-way, and the other method is removal, which involves  
6 digging it out and removing it.

7 So these methods differ in terms of operations, and of  
8 course the environmental and land use impacts and cost.

9 Could you just briefly, or in some summary form,  
10 compare for us these two methods, starting with potential  
11 environmental impacts and last use disturbances of one  
12 method as opposed to the other method?

13 MR. WALKER: As we talked about earlier, I think Roger  
14 had mentioned that a large-scale abandonment project would  
15 be similar in scope and effort to a pipeline construction  
16 project.

17 So if you were removing the pipe from the ground,  
18 there is a lot of disturbance, a lot of digging to do that  
19 work. So the code points to technical papers, even filed  
20 in the DNV report that GAPLO filed, that sensitive areas  
21 such as national provincial parks, ecological reserves,  
22 regionally significant, environmentally-sensitive areas  
23 should be subject to in place abandonments.

24 So those are the types of areas where you would look  
25 at abandoning in place more likely than removing the pipe.

26 If you do abandon in place, there are other techniques  
27 you can use as well. We've filled pipes with grout to  
28 prevent subsidence for when we have left pipes in the



1 ground as well.

2 MS. DJURDJEVIC: In terms of residential and/or  
3 agricultural properties, what do the codes or technical  
4 papers say in those circumstances, when looking at one  
5 method as opposed to the other?

6 MR. WALKER: Each case would have to be looked at on  
7 an individual basis. But for agricultural lands, more  
8 often than not it will probably point to removing the pipe.

9 MS. DJURDJEVIC: And why is that?

10 MR. WALKER: Well, again, you would have to look at it  
11 on a case-by-case basis. But if there isn't environmental  
12 issues -- and it would depend on how deep the pipe is.  
13 That's one of the factors that is looked at, what current  
14 and future land use is, if there is likelihood of  
15 development on the land.

16 So I am not going to say that every time in  
17 agricultural land, it is going to say you should remove the  
18 pipe. But it would probably trend towards that side.

19 MS. DJURDJEVIC: And what are the relative costs of  
20 pipeline abandonment for the two methods?

21 MR. PIETT: Again, without the scope of a project,  
22 that is very difficult to answer.

23 But again, looking at something like this project, you  
24 could take the costs of this project and probably add  
25 another 25 percent to the cost if you are going to  
26 be removing pipe as well.

27 In an abandonment case, there still is cost because  
28 you have to actually remove the pipe from service, so cut

1 it at both ends. And then depending on the technique that  
2 has been chosen to abandon it in place, it will have some  
3 type of cost.

4 But again, until we know the scope, we can't cost  
5 that; it would be less.

6 MS. DJURDJEVIC: And presumably Union, or whoever the  
7 developer is, bears the cost of the abandonment; is that  
8 correct?

9 MR. SMITH: Sorry, when you say Union bears the cost -  
10 -

11 MS. DJURDJEVIC: Well, they pay for any expenses  
12 associated with the cost. It is not a landowner's  
13 responsibility anyway?

14 MR. SMITH: No, it would be a cost of service.

15 MS. DJURDJEVIC: So it something that would go back  
16 into rate base -- or cost of service, rather?

17 MR. SMITH: Yes. I mean, it is reflected in Union's  
18 depreciation rates; that is the way it is typically dealt  
19 with.

20 MS. DJURDJEVIC: All right. Moving on to a different  
21 line of questions, but about abandonment, we heard during  
22 the examination or cross-examination one of the witnesses  
23 referred to developments at the National Energy Board  
24 with respect to pipeline abandonment principles and  
25 requirements, and that this was a, quote/unquote, "live  
26 issue."

27 And if I understood correctly, that is one of the  
28 reasons why Union prefers to not enter into agreements that

1 deal with abandonment methods at the construction phase,  
2 but rather wait until the abandonment occurs.

3 Did I characterize your evidence correctly?

4 MR. WALKER: I think is fair. I guess the way I  
5 stated it was that it is an area of -- it is evolving, so  
6 there are new technical ways that are being looked at to do  
7 things. So I think we would want to keep our options open.

8 MS. DJURDJEVIC: Now, this proceeding obviously is  
9 under the jurisdiction of the Ontario Energy Board and not  
10 the National Energy Board.

11 But just for comparison, I would be interested to  
12 know, if you have the information, what the NEB's  
13 regulations are with respect to abandonment.

14 When I say "regulations" I am using that term loosely.  
15 It includes regulations, rules, guidelines and other  
16 regulatory tools.

17 Are you able to provide us any factual information  
18 about that? I see your counsel is going to say something.

19 MR. SMITH: Why don't we let the witness answer? But  
20 I think this is also a legal question, because I will be  
21 raising this in argument. So I am happy to provide the  
22 position as well, so you have it.

23 MS. DJURDJEVIC: At this point, I am just looking for  
24 factually, in terms of the -- does the NEB have -- is it  
25 more prescriptive requirements or -- you know, how does  
26 Union's approach intersect with what NEB regulations are?

27 MR. WALKER: As I touched on earlier, the NEB would  
28 have an application type of approach for an abandonment.

1 But besides that, the new Z662 code that we talked  
2 about this morning, there is a note that refers to some  
3 technical papers that the NEB commissioned.

4 Because it's a note in the CSA code, it's not  
5 mandatory; it's meant as guidance. But it is there as a  
6 document that will help people put together their  
7 abandonment plans. So it's not mandatory, but it is  
8 basically a code recommendation: Here is something that  
9 you should follow.

10 MS. DJURDJEVIC: Obviously after the fact we will be  
11 doing some research on this, but this morning's evidence  
12 was the first time we heard the reference to the NEB  
13 regulations, so -- which is why I am asking some questions  
14 that you can perhaps enlighten us.

15 The NEB regulations, do they tend to leave it to the  
16 developer to decide which abandonment method is most  
17 appropriate, or does the landowner have some say in the  
18 matter?

19 MR. WALKER: So the document that I am referring to,  
20 the new CSA Z662 code, points to -- like I said, is not  
21 regulation; it is a technical guidance document. In that  
22 document it does talk about the methods you would use to go  
23 through and evaluate each of the conditions and determine  
24 what the best abandonment plan would be. It has things in  
25 it that talk about it at a higher level that would say  
26 things like: In an abandonment project it is possible that  
27 a combination of both the abandonment in place and removal  
28 options would be used based on site-specific requirement.

1 MR. SMITH: Slow down.

2 MR. WALKER: Sorry. It talks about basically that  
3 it's possible that a combination of both abandonment in  
4 place and pipe removal options would be used based on site-  
5 specific requirements. It has sections that would go into  
6 technical issues like ground subsidence, soil mechanics,  
7 pipeline corrosion, soil and groundwater contamination,  
8 pipe cleanliness.

9 So it gives guidance on how to evaluate each of those  
10 types of issues and how to kind of weigh the risk of each  
11 of those in your abandonment plan.

12 MS. DJURDJEVIC: All right. Thank you. That was  
13 useful.

14 And again, just to clarify, when I say "regulations" I  
15 am using the term loosely as various kinds of instruments  
16 that regulators refer to, and that would include guidance  
17 or guidelines.

18 Do you know whether the NEB's regulations or guidance  
19 contemplates making a decision on the abandonment method at  
20 the time of the abandonment rather than anticipating it,  
21 you know, at the time of construction?

22 MR. WALKER: The technical paper seems to be slanted  
23 towards doing the assessments at the time of abandonment.  
24 I am just trying to think of what the NEB application  
25 process for the abandonment process would be at the time of  
26 abandonment as well.

27 So you wouldn't -- I mean, if you were applying to  
28 abandon a pipeline, it is going to be done at the time of

1 that decision is made or that plan is developed.

2 MS. DJURDJEVIC: So my last question is kind of a  
3 hypothetical. What would be Union's position or view if  
4 the Board was to consider including in the easement  
5 agreement or in the letter of understanding or as a  
6 condition of the leave to construct -- whichever is the  
7 most appropriate document or context -- if we were to  
8 include a condition or a requirement that Union is required  
9 to retain an independent consultant to determine the  
10 preferred method of pipeline abandonment?

11 And when I say "independent consultant" I mean that is  
12 somebody jointly selected by Union and landowners.

13 What would be your comment or response to that sort of  
14 hypothetical?

15 MS. HARE: Just to make your question clearer, when?  
16 Now, or at the time of abandonment?

17 MS. DJURDJEVIC: Sorry, at the time of abandonment.

18 MR. WALKER: I mean, I suppose it is hard to imagine a  
19 situation 50 years in the future, but I guess if it was an  
20 expert in that area that could -- that was agreeable, that  
21 was knowledgeable in that area, I wouldn't see too many  
22 issues with that type of an approach.

23 MS. DJURDJEVIC: Okay. Those are all my questions.  
24 Thank you very much, panel.

25 MS. HARE: Okay. Thank you.

26 **QUESTIONS BY THE BOARD:**

27 MS. FRY: A couple of additional questions. One of  
28 you gentlemen -- and I can't remember which one it was --

1 just to be clear, mentioned that there have been major  
2 changes to the codes on abandonment since the 2007 case.  
3 And just to be clear, are you referring to the draft CSA  
4 standard, which I see has a date of 2013, or are you  
5 referring to other things also?

6 MR. WALKER: It was mainly the 662, so there is -- the  
7 current edition is the 2011 version. These draft comments  
8 in 2013 are working towards the 2015 edition that would be  
9 released this year.

10 MR. WACHSMUTH: I think I also was part of that  
11 statement, and I think I said that since 2015 a number of  
12 things -- hearings have been held at the NEB that dealt  
13 with the abandonment issue, so it was -- as well as the  
14 code things, there also are some other hearings that were  
15 held on abandonment at the NEB since --

16 MS. FRY: Since 2007.

17 MR. WACHSMUTH: -- since 2007. And the one report  
18 that was in GAPLO's evidence is really a result of those  
19 changes.

20 MS. FRY: Thanks. Okay.

21 And I want to try two very general scenarios on you  
22 and see if you can comment on them.

23 Let's say you were in an abandonment scenario, segment  
24 of pipeline on a given piece of land, whatever it is, and  
25 in the first scenario you dealt with abandonment by taking  
26 the pipe out of the ground and doing remediation on the  
27 land, and in the second scenario you left the pipe in the  
28 ground but you did whatever is the appropriate mediation.

1           Is it your view that in both scenarios the end point  
2   of the ground -- and I am not being technical here -- would  
3   be basically the same, or do you see possible differences  
4   in what you would get as the end point, depending on  
5   whether you took the pipe out of the ground or not?

6           MR. PIETT:  If we are talking about specific, we call  
7   it, grade elevation, and --

8           MS. FRY:  Well, any characteristics -- as I say, I am  
9   being non-technical -- any characteristics of the ground or  
10  soil structure.

11          MR. SMITH:  Sorry, just by way of clarification --

12          MS. FRY:  Yes.

13          MR. SMITH:  -- do you also include things like crop  
14  yield --

15          MS. FRY:  Anything, anything.

16          MR. SMITH:  Anything?  Okay.

17          MR. PIETT:  So in general terms it would be the same.  
18  However, in the case where you actually remove the pipe,  
19  you would do basically a reset, because you would have to  
20  disturb it again.  You would have to strip the topsoil.  
21  You would have to remove the pipe.  You would impact  
22  whatever environmental things are there, and you bring the  
23  topsoil back, restore everything, as we do in normal  
24  construction, and then if there is productivity losses or  
25  anything like that, it would take a number of years for  
26  that to come back under our normal conditions.

27          So if the pipe was built in the year 2015 and then  
28  abandonment was, you know, 100 years later, then there is



1 going to be that kind of environmental difference that you  
2 are going to impact the area at the time of the  
3 abandonment.

4 MS. FRY: So are you saying the recovery period would  
5 be longer if you took the pipe out of the ground than if  
6 you simply did appropriate abandonment measures and left it  
7 in the ground, or would the recovery period be basically  
8 the same?

9 MR. VADLJA: I would say that the recovery and the  
10 impact would be significantly greater to remove that pipe  
11 out of the ground. I mean, as Roger -- as my colleague had  
12 mentioned earlier, you are in essence constructing a right-  
13 of-way, stripping topsoil, removing that pipe, disrupting  
14 all the drainage tile, working through watercourses to  
15 remove that pipe. There is a lot of disruption, removing  
16 tree cover, so there is significant -- there would be  
17 significant impact if you had to remove that pipe, as  
18 opposed to just leaving it in the ground.

19 MS. FRY: Okay. And that is magnitude of disruption.  
20 Are you also talking about length of recovery period?

21 MR. VADLJA: Exactly. Length of recovery period. I  
22 mean, if you are going to the extent of removing that pipe  
23 from the ground, disrupting the land, the watercourses,  
24 that would then take some time to recover. Correct.

25 MS. FRY: And it would take more time than if you did  
26 the appropriate abandonment measures just leaving it in the  
27 ground?

28 MR. VADLJA: For sure.

1 MS. FRY: Okay. Thank you.

2 MS. HARE: I would just like to go over the timing of  
3 the letter of understanding. I understood Mr. Smith to say  
4 that it was first made available to GAPLO and other parties  
5 on February 12th. Did I understand that correctly?

6 MR. SMITH: On or about. I just can't remember when I  
7 e-mailed it to my friend, but it was there or thereabouts.

8 MS. HARE: But the settlement conference was the 9th.  
9 So does that mean GAPLO did not have it at the settlement  
10 conference?

11 MR. SMITH: I don't want to get into what happened,  
12 but --

13 MS. HARE: The point is they didn't have it at the  
14 settlement conference?

15 MR. SMITH: They didn't have it that day. But you  
16 will remember the settlement conference and discussions  
17 between the parties continued on a without-prejudice basis  
18 for some period of time, including the period of time after  
19 I provided the document.

20 MS. HARE: Okay. I understand that. Could you please  
21 tell me why you did not answer the interrogatory that GAPLO  
22 posed, No. 12, when they asked for the letter of  
23 understanding?

24 MR. WACHSMUTH: What it goes back to -- back in the  
25 2005-'06 time frame, Union constructed the Hamilton-to-  
26 Milton loop as well at that point in time.

27 The landowners at that point in time did not want an  
28 LOU; they wanted to be dealt with individually. And

1 really, at that point in time there was not enough --  
2 because there's so many differences in the landowners along  
3 the Hamilton-to-Milton section -- you have a few farms, you  
4 have got a lot of large residential, you have got a golf  
5 course, some orchards, a lake where people go and do fly  
6 fishing at -- there really was not an interest in the  
7 landowners to get together and form a committee and develop  
8 an LOU. They wanted to be dealt with individually.

9       So what we did -- when we answered the question to  
10 GAPLO, we weren't aware that people would want an LOU. We  
11 have since agreed, as part of the settlement conference, to  
12 offer everybody the LOU that we prepared for Brantford-  
13 Kirkwall.

14       But at one point in time, back when the evidence and  
15 that was being prepared, we weren't sure that the  
16 landowners would even want an LOU, a letter of  
17 understanding.

18       MS. HARE: Well, that still leaves me a bit puzzled as  
19 to why you didn't answer the interrogatory, because --

20       MR. WACHSMUTH: We didn't have the Hamilton-to-Milton  
21 LOU at that time.

22       MS. HARE: But you're telling me it is the same one  
23 used on a previous project, so you had one?

24       MR. WACHSMUTH: We had a Brantford-Kirkwall LOU and  
25 changed the names from Brantford-Kirkwall to Hamilton-  
26 Milton, and left all the words the same.

27       MS. HARE: Do I also understand that you have not had  
28 any discussions with GAPLO offline about any of the issues

1 we have been talking about today?

2 I don't understand. I thought Union typically did  
3 meet with landowner associations concerning these types of  
4 issues, but it sounds to me like --

5 MR. SMITH: Sorry, I don't want to talk about the  
6 without-prejudice discussions. But GAPLO was at the  
7 settlement conference, and even subsequent to providing the  
8 letter of understanding we have had negotiations and they  
9 did result in certain changes. We just haven't reached a  
10 comprehensive deal.

11 But we did have discussions, Union and Mr. Goudy and  
12 his client, and we got as far as we got with K1.3. I had  
13 hoped that today wasn't going to -- well, it was apparent  
14 that there were a number of items that, maybe with some  
15 further discussion, we wouldn't have wasted the Board's  
16 time today on. And for that, I definitely apologize.

17 But it would be wrong to conclude that there weren't  
18 discussions and an effort made.

19 MS. HARE: That is really all I wanted to know. Thank  
20 you. Those are my questions.

21 Redirect, Mr. Smith?

22 MR. SMITH: I have no questions in re-examination.

23 MS. HARE: Okay. Thank you.

24 MR. SMITH: Sorry, I would just ask one quick  
25 question.

26 I think this is a matter of argument, but because it  
27 keeps coming up in cross-examination, I will just ask for  
28 the Board's guidance in relation to it.

1           If it would be of assistance, by way of undertaking or  
2 otherwise, we can provide the regulatory scheme that  
3 applies at the National Energy Board, if it's of assistance  
4 as it relates to abandonment.

5           If you simply go to the National Energy Board website,  
6 you will see that it is very involved. But I don't know  
7 whether, for the sake of the record, you would like that as  
8 a factual, or if you want me to compile the documents and  
9 make them available for you for argument, because there is  
10 a lot more than simply the technical paper that GAPLO put  
11 forward.

12           MS. HARE: Thank you. We will discuss that over the  
13 break.

14           What I suggest we do is take a break now, during which  
15 time, Mr. Goudy, you can assemble your witnesses at the  
16 appropriate spot. And then we will be ready for that  
17 examination after the break.

18           So let's break until 3:40. Thank you very much,  
19 witnesses. You are now excused.

20           MR. SMITH: Thank you.

21           --- Recess taken at 3:17 p.m.

22           --- Upon resuming at 3:43 p.m.

23           MS. HARE: Please be seated.

24           Mr. Goudy, please introduce your witnesses.

25           MR. JOHN GOUDY: Thank you, Madam Chair.

26           On the right side is Ian Goudy, chair of GAPLO and a  
27 member of GAPLO, and on the left is Rick Kraayenbrink,  
28 another member and director of GAPLO. I guess could I ask

1 that the witnesses be affirmed, and then I will take them  
2 through a brief introduction of their experience.

3 MS. HARE: Yes, thank you.

4 **GAPLO - Panel 1:**

5 **Ian Goudy, Affirmed**

6 **Rick Kraayenbrink, Affirmed**

7 **EXAMINATION IN-CHIEF BY MR. JOHN GOUDY:**

8 MR. JOHN GOUDY: Mr. Kraayenbrink, I will start with  
9 you. Could you please give the panel a summary of your  
10 background and experience as it relates to pipelines?

11 MR. KRAAYENBRINK: I have been farming for 35 years  
12 with three brothers and a cousin, and I have owned several  
13 farms with different pipelines on them. One of the farms  
14 had seven. There was three -- or four national regulated  
15 lines and three Union lines, and at the present moment I  
16 own a farm with one NEB line, which is Vector, and another  
17 place where I have my residence, another farm, and it is a  
18 24-inch line owned by Union.

19 And in that time frame I have seen one -- three  
20 pipelines go in, into the land. So I have experience of,  
21 through my own land, having this pipeline construction.

22 MR. JOHN GOUDY: Have you had any experience in  
23 dealing with pipeline companies with respect to  
24 construction practices?

25 MR. KRAAYENBRINK: Yes, I had -- back in 2000, where  
26 we had no agreement whatsoever with TransCanada. It was  
27 absolutely a bad situation, because we had absolutely zero  
28 control, no letter of understanding, no consultation with

1 myself. And so the previous -- the lines after that is we  
2 had landowners get together, and we had reasonable  
3 negotiations with the company with letters of understanding  
4 so that the pipeline construction was done in a fairly  
5 reasonable manner.

6 MR. JOHN GOUDY: And Mr. Goudy, I have the same  
7 questions for you. Could you please give us a summary of  
8 your experience and background as it relates to pipelines?

9 MR. IAN GOUDY: I have dealt with Union Gas for 58  
10 years now. The original line was built, the 26-inch line  
11 was built on our property in 1957. The 34-inch line was  
12 built around 1962. My parents were involved with that  
13 construction, and I watched them go through expropriation,  
14 and I can tell you it isn't a very nice thing to have  
15 watched them go through.

16 By the time the 42-inch line came in 1980, I owned the  
17 farm, and I appeared at a National Energy Board hearing in  
18 London by myself.

19 And then in 1990 the 48-inch line was -- the hearing  
20 for it took place in London as well.

21 MR. JOHN GOUDY: Sorry to interrupt, but you made a  
22 reference to the National Energy Board previously --

23 MR. IAN GOUDY: Oh, the Ontario Energy Board, I am  
24 sorry. And I appeared in that hearing as well.

25 In the meantime, there were two Lake Huron large-  
26 diameter pipes for the Lake Huron water system built  
27 through our property as well.

28 Of the six pipelines, the only one where the land

1 wasn't expropriated was the -- or the only two would be the  
2 48-inch line and the last water line. That -- that is my  
3 history with pipelines.

4 MR. JOHN GOUDY: And could you give a summary of your  
5 experience in dealing with, I suppose -- specifically with  
6 Union Gas in relation to construction practices?

7 MR. IAN GOUDY: The first two lines that were built --  
8 and I find it disturbing to look in the latest LOUs that  
9 there is still wording in there to allow for the  
10 construction of a pipeline with no topsoil stripping. That  
11 is disturbing to me, because the first two lines, that is  
12 what happened. There was no topsoil stripping, not even  
13 over the trench, and there was severe damage done to the  
14 easement that lasts to today. There are areas on our  
15 property that are still suffering significant damage from  
16 the construction back in 1957.

17 When the 42-inch line was built, the hearing that I  
18 attended in London took place shortly after the Lewington  
19 and O'Neill case, and what came from that hearing over that  
20 Enbridge pipeline was that topsoil should be stripped on  
21 the easement. And it was at that point that I took their  
22 evidence into that hearing, and the Board agreed at that  
23 time, where the landowner requested it, that topsoil should  
24 be stripped on the easement; the total area of the easement  
25 should be stripped.

26 And so the 42-inch line, which was built in 1980 on  
27 our property, in that range, the topsoil was stripped and  
28 replaced the year of construction.



1 Well, then by the time the 48-inch line came, it was  
2 decided that because there was virgin topsoil and  
3 previously disturbed topsoil, that it should be stripped,  
4 the virgin one way and the previously disturbed topsoil  
5 stripped the other way.

6 There were a lot of changes made in the 1989-'90  
7 hearing. And that is my experience with hearings.

8 MR. JOHN GOUDY: You heard the evidence that Union's  
9 witness panel gave earlier today about the over-wintering  
10 of topsoil?

11 MR. IAN GOUDY: Yes, and --

12 MR. JOHN GOUDY: Sorry to cut you off, but Union said  
13 -- Union's evidence was that in its view the best practice  
14 is to replace stripped topsoil in the year of construction  
15 where the soil conditions are appropriate.

16 And I guess starting with you, Mr. Goudy, what is  
17 your position on that issue?

18 MR. IAN GOUDY: I strongly disagree with that  
19 position.

20 It was the construction in 1980 of the 42-inch line  
21 where the topsoil was replaced the year of construction.  
22 By the spring of the following year, partially because the  
23 soil was left in such a loose condition -- and when they  
24 are trying to prepare for compaction that is created by the  
25 construction, the work they do on that soil leaves it in a  
26 very loose condition.

27 And over the winter, through heavy rains and heavy  
28 snow melts, there was significant erosion. And at the

1 hearing for the 48-inch line, I produced -- the lawyer  
2 involved produced the evidence which showed erosion  
3 of 2 feet or better through the easement in different areas  
4 during the 42-inch construction.

5 And with expert evidence, we presented -- this was the  
6 first time that the request was put out to over-winter  
7 topsoil, and on my property, from that construction, the  
8 topsoil was over-wintered.

9 What took place was the topsoil was stripped both  
10 directions; the disturbed topsoil was pushed one way and  
11 the virgin soil the other. There basically was no cover  
12 crop on the topsoil piles.

13 Since then, I have been involved with the Lake Huron  
14 construction, and they have done the same type of thing  
15 with over-wintering and have established cover crops on  
16 those topsoil piles. So it does prove that it can be  
17 done.

18 But anyway, with the 48-inch line there was no  
19 significant erosion in those topsoil piles.

20 The year of construction, the tile drainage systems  
21 were installed. There were parallel tiles put between each  
22 pipeline. Even the old ones, they agreed to put parallel  
23 tile. So it meant that the easement is drained every 25  
24 feet, and then the outlet from those drains -- only the  
25 outlets cross the trench area. And in that construction,  
26 those tiles were installed the year of the pipeline  
27 installation.

28 There was no subsoiling done that year. The trench

1 was slightly crowned when they left it with the subsoil  
2 that was there. In the following summer, they came back  
3 and they dug up the tile that had crossed the pipeline, the  
4 outlets that crossed the pipeline, to make sure they hadn't  
5 sagged. And where there was any subsidence, they repaired  
6 it with the subsoil that was still exposed.

7 And then they came back and they subsoiled it with  
8 their equipment, picked the rocks, levelled it out, and  
9 then the topsoil was brought back. They did the same  
10 process of removing the compaction of the topsoil. They  
11 removed the stones and levelled it out, and established a  
12 cover crop.

13 Now, that work was done in July or early August. So  
14 when a cover crop was applied to that soil, it was able to  
15 establish itself and get roots so that there wouldn't be  
16 erosion the following winter.

17 And that same process was done on the Lake Huron  
18 pipelines as well, and I can honestly sit here and tell you  
19 that there is no issue with subsidence on either of those  
20 pipelines. The drainage systems have worked as good as  
21 drainage can work where you have the influence of a pipe in  
22 the ground, and it was very successful.

23 And it aggravates me to think that all the effort  
24 that was put into this issue of over-wintering, as well as  
25 all the effort that was put into the process to come up  
26 with the LOU for the Strathroy-Lobo agreement -- it  
27 aggravates me that we are going backwards here.

28 There is a way of building these pipelines at very

1 little cost, extra cost, to do it right. And I thought we  
2 had proved that in the hearing back in 1990, but apparently  
3 we didn't.

4 MR. JOHN GOUDY: Mr. Kraayenbrink, there was some  
5 discussion earlier about providing for a landowner option  
6 to have a mulch layer between the stripped topsoil and the  
7 virgin topsoil in the area where the topsoil is stored.

8 What is your experience with using a mulch layer?

9 MR. KRAAYENBRINK: I have one experience with the 24-  
10 inch line that went through one of our properties.

11 We put a mulch layer down. They actually hired us to  
12 put the mulch layer down, which consists of just simple  
13 straw bales, and we have a chopper and with the front-end  
14 loader to dump it in.

15 We hauled the bales there with our hauling equipment,  
16 and within hours we had the whole temporary work area  
17 covered with straw, so that you can provide a distinct area  
18 between the virgin topsoil and the stripped topsoil.

19 Topsoil, for us, is our life's blood. That is how we  
20 put food on the table for our families. And when a company  
21 has the right -- when we have no right to go and have an  
22 option of how to best protect our topsoil, it is appalling  
23 in this day and age.

24 Technically, am I an expert? I guess not under the  
25 technical terms. But with 35 years of experience in  
26 farming, I certainly know and have a lot of experience on  
27 how to treat topsoil.

28 It takes roughly about 1,000 years to make 1 inch of

1 topsoil. This is an extremely precious commodity, not to  
2 just us that make a living, but to all of society.

3 I also -- we own an excavator, and on one of my  
4 cousin's farms we had to put a drainage system in, which  
5 consists of 12-inch pipe. But in order to dig the trencher  
6 in, I had to remove 12 feet wide, 5 feet deep of soil,  
7 again, which consists of stripping the topsoil and the  
8 subsoil, which, again, I used a mulch layer. And I  
9 personally have experience of pulling that back with the  
10 machine and then you -- the soil will not stick together  
11 because of the mulch layer, and it just slides back  
12 perfectly, so all the virgin soil is left exactly where it  
13 is supposed to be.

14 So in my opinion, I don't think any company should  
15 ever be allowed to go and put stripped topsoil on clean  
16 base sub -- or virgin topsoil. If there is a cover crop,  
17 that will work fine too. But if there isn't, then I think  
18 a mulch layer is absolutely essential. It is very  
19 economical to do. You know, we use thousands of bales of  
20 straw for animals, and to get a few bales of straw to put  
21 on the temporary work area to put underneath that topsoil  
22 is so -- so insignificant of a cost compared to the cost it  
23 could cost us down the road as a farmer.

24 MR. JOHN GOUDY: The last question I have for both of  
25 you to comment on, it arises from a question that Board  
26 Member Fry asked of Union's panel, and that is with respect  
27 to abandonment. And so I am going to try to put the same  
28 question to you.

1           From the landowner perspective, is there a difference  
2   in the condition of the ground or the condition of the land  
3   that results from abandonment by removal versus abandonment  
4   in place?

5           MR. IAN GOUDY: Yes, there is. Abandonment in place  
6   is maybe initially no different than when the pipeline was  
7   in activity. The problem is -- is eventually that pipeline  
8   is going to rot out and it is going to start to collapse,  
9   and if that is a number of years down the road, and in the  
10   meantime -- I suppose our issue is if there is no more gas  
11   going to flow in these pipelines, at some point gas will  
12   run out, and when that day comes and there is no more gas  
13   in those lines, I expect Union Gas will no longer exist  
14   either. And our concern is that eventually those pipes  
15   will rot out.

16          Now, when a 4-foot diameter pipe starts to rot out --  
17   the witnesses earlier on talked about how to remove the  
18   pipe. It would affect drainage. Well, as those pipes  
19   start to collapse, that is also going to affect drainage.  
20   It is going to leave an indentation in the soil. It will  
21   create a safety factor for landowners -- or farmers who are  
22   operating over top of those pipelines at some point, and  
23   there will come a day where it will have to be addressed,  
24   and probably by that time one of the first-line people who  
25   are going to be affected by that is the landowner  
26   themselves.

27          And it really bothers me, and I am sure a lot of other  
28   landowners, that our land was taken from us through the

1 right of expropriation. These pipelines were built with  
2 hardly any input of landowners, as far as the pipe wall  
3 thickness, anything to do with the pipeline construction.  
4 We had very little influence on it.

5 As far as compensation goes, we had very little  
6 influence over that. In fact, I can remember my parents  
7 being told: If you don't accept this and you want to go to  
8 court, we will take your farm from you. That was said to  
9 my parents by a Union Gas representative.

10 And so at the end of the life, at the death of the  
11 pipeline, we get it again. They turn around and say:  
12 Okay, now, let's not talk about it. It isn't happening  
13 today. But it will happen some day, and so then we will be  
14 left with how to deal with the junk that's left in the  
15 ground, and it will be costly. I think we -- nobody has  
16 put a price on it, but I know of a TransCanada study that  
17 there is a significant cost to removing these pipes, but  
18 there is a significant cost to us to leave them in place.

19 And with the wording that was put into the Strathroy-  
20 Lobo agreement, it gave us some satisfaction that things  
21 were going to be better. When we drop our defences, when  
22 we weren't there for the previous construction to this one,  
23 plus this construction, it all falls back to the way it was  
24 in the '50s.

25 If a landowners organization like GAPLO didn't exist,  
26 I have my doubts if anything would have changed from what  
27 it was in the 1950s. Every change that has been made that  
28 makes it better for farmers in this case has come from

1 negotiations which have taken place through hearings such  
2 as this, and to have things go back from what it was in  
3 2005, that is sad.

4 I'm done.

5 MR. KRAAYENBRINK: With Union Gas's expert that was  
6 sitting to my right here -- with the Union Gas sitting to  
7 my right here, he did say that probably on agricultural  
8 land the pipe should be removed, and I wholeheartedly agree  
9 with that. We ourselves on our farm, we own a whole  
10 drainage plough system. We probably put in roughly 2  
11 million feet of drainage tile in the last 15 years on our  
12 own.

13 These pipelines are a real issue to deal with, because  
14 we cannot go and exactly drain the farm systematically the  
15 way we want to unless that these lines are all deep enough  
16 and there is a whole grid or layout of the whole drainage  
17 system prior to the pipeline going in.

18 Today probably there is 80 percent of the drainage  
19 contractors do all the drainage via satellite, and that is  
20 so simple with technology today. As soon as it is all  
21 punched in of where you are, all that is required to get a  
22 topographic map is just to drive your piece of equipment up  
23 and down the whole field, and you have it.

24 On an easement, it would just be the easement which  
25 would be -- I don't know. It would take a half an hour,  
26 and these lines could be installed where they should be.

27 But with abandonment, with these old lines, as soon as  
28 Union's gone, guess who is left with the problem? How are



1 we going to get through?

2 One of the experts was talking about filling it with  
3 grout or something. So now if we need a main drain that  
4 has got to go through middle of the pipe. How are we going  
5 to do that? That is going to be extremely costly to us.

6 The other thing is the conduit of water. If it ain't  
7 filled with grout, and my farm is the low point, as soon as  
8 that pipe starts to rot out it is a conduit -- it is a  
9 tile. And guess where all the water is going to end up?  
10 On my farm. And now where is it going to go?

11 The other issue, and Ian touched on that, is the  
12 safety issue. Our equipment anymore are combines. If the  
13 combine bed is full, or fairly full, that combine is  
14 starting to become a heavy piece of equipment. And once  
15 those pipelines rot and that front end drops, that driver  
16 could be injured or killed.

17 And with a self-propelled sprayer, which most of us  
18 have now, we run between 9 to 14 miles an hour through the  
19 field. If that front end drops, my tank is sitting right  
20 behind the cab, and if that whole machine stops, I am a  
21 goner.

22 So it is a real, real issue, this whole abandonment  
23 thing.

24 Let me ask all of you, as Panel and the Board: Would  
25 you like to have an abandoned gas station in your front  
26 yard? That is what they are asking us to do, just leave  
27 their junk and garbage in our field. And we are saying:  
28 No, just simply take it out.

1 I think that is all I have to say on the abandonment  
2 issue.

3 MR. JOHN GOUDY: Those are all my questions in-chief.

4 MS. HARE: Thank you.

5 Mr. Smith, do you have cross-examination?

6 MR. SMITH: Just one moment. I need to clarify  
7 something...

8 No questions.

9 MS. HARE: Thank you.

10 Ms. Djurdjevic?

11 **CROSS-EXAMINATION BY MS. DJURDJEVIC:**

12 MS. DJURDJEVIC: Just one question, the same question  
13 that I had posed to the witnesses from Union.

14 Hypothetically, how would GAPLO respond to Board  
15 Staff's suggestion that an independent consultant be  
16 retained to determine what the most appropriate method of  
17 pipeline abandonment would be, at the time that abandonment  
18 becomes necessary?

19 Would that be adequate protection, in your view?

20 MR. KRAAYENBRINK: In my view, no, because at the end  
21 of the day, it is on agricultural land and I am strictly  
22 speaking on agricultural land now.

23 I don't want that option whatsoever, to leave a  
24 pipeline in the ground, for all the reasons that I just  
25 talked about, and because with a consultant is -- with that  
26 is who is paying that consultant?

27 We are the owners of the land; we are the ones that  
28 have to live with the land. We don't want an abandoned gas

1 station. We just simply want it out.

2 And when it comes to cost, that might be the cheapest  
3 method for Union, but it is by far the most expensive  
4 method for us as landowners.

5 MS. DJURDJEVIC: Thank you. Those are all my  
6 questions.

7 MR. IAN GOUDY: Could I just add to that?

8 We don't -- abandonment is a consumer issue. I use  
9 natural gas; I was lucky enough to get it. But to not be  
10 collecting money now at the beginning of the life of a  
11 pipeline, to wait until the end of a pipeline, knowing what  
12 I know about pipeline removal, it is going to be too late.

13 So unless we start to prepare for that situation when  
14 it comes -- and I am not suggesting that Union Gas,  
15 the company, is going to be completely responsible for that  
16 cost. As I say, the consumer in the end is the one who  
17 should pay for that cost. But it is something that we all  
18 need to face up to right now, and start to deal with it.

19 As Rick said, we as landowners should not be saddled  
20 with that liability. Thank you.

21 MS. HARE: Thank you. The Panel has no questions.  
22 Mr. Goudy, do you have any redirect?

23 MR. JOHN GOUDY: I don't, thank you.

24 MS. HARE: Thank you very much for your testimony.

25 Mr. Smith, are you ready with your argument in-chief,  
26 or would you like a few minutes? Are you ready?

27 MR. SMITH: Ready to go.

28 MS. HARE: You may be excused, if you would rather sit

1 elsewhere -- or if you are happy there, it is up to you.

2 MR. SMITH: There are just a couple of things that I  
3 would like to distribute, if I may.

4 MS. HARE: By the way, Mr. Smith, you asked the  
5 question before the break as to whether the Panel would  
6 benefit from your producing a summary of NEB regulations  
7 with respect to abandonment, and we do not feel that is  
8 necessary.

9 MR. SMITH: Okay. Actually, one of the things I have  
10 is section 74 of the National Energy Board Act, which I  
11 think is relevant to my argument.

12 So I did get a copy of that, and I will distribute it.

13 MS. HARE: Okay. Thank you.

14 **SUBMISSIONS BY MR. SMITH:**

15 MR. SMITH: So what I am distributing, members of the  
16 Panel, is a package of materials that are relevant to the  
17 issue, largely relevant to the issue of abandonment.

18 There are two issues that, broadly speaking, the Board  
19 is being asked to address. They are abandonment, which is  
20 contained in the easement agreement, and they are the  
21 construction-related matters, which are set out in the  
22 letter of understanding.

23 I am going to focus my time -- because it is really my  
24 issue, I suppose, abandonment, and I can probably do no  
25 better than the witnesses did on the construction matters,  
26 it not being my area of expertise. But I will have a  
27 couple of comments.

28 So what you have in front of you is -- what I have

1 given you, and we may want to mark this -- but what I have  
2 given to you is a copy of the Technical Standards and  
3 Safety Act, a copy of the oil and gas pipeline systems  
4 regulation 2010. You should have a copy of EB-2006-0305,  
5 and I hope you also have a copy of the National Energy  
6 Board Act, section 74.

7 MS. DJURDJEVIC: Would you like to mark these as  
8 exhibits, Mr. Smith?

9 MR. SMITH: Yes, please.

10 MS. DJURDJEVIC: I am going to suggest we make them  
11 separate exhibits.

12 K1.4 will be the Technical Standards and Safety Act,  
13 2000, Ontario Regulation 210/01.

14 **EXHIBIT NO. K1.4: TECHNICAL STANDARDS AND SAFETY ACT,**  
15 **2000, Ontario Regulation 210/01.**

16 K1.5 is the Technical Standards and Safety Act, 2000.

17 **EXHIBIT NO. K1.5: TECHNICAL STANDARDS AND SAFETY ACT,**  
18 **2000.**

19 MS. DJURDJEVIC: K1.6 is OEB Decision EB-2006-0305.

20 **EXHIBIT NO. K1.6: DECISION IN EB-2006-0305.**

21 MS. DJURDJEVIC: K1.7 is excerpt -- or section 72 from  
22 -- where is the Act -- oh, the National Energy Board Act.  
23 Yes, right at the top. Okay?

24 **EXHIBIT NO. K1.7: SECTION 72 FROM THE NATIONAL ENERGY**  
25 **BOARD ACT.**

26 MR. SMITH: Thank you.

27 So let me deal first with the issue of abandonment.  
28 And in my submission, the proper question here is not

1 whether the clause that GAPLO is seeking to include in the  
2 form of easement was or was not included in the Strathroy-  
3 Lobo form of easement or, frankly, any other easement.  
4 Clearly it was, and nobody disputes that.

5 The proper question before this Board is also not  
6 whether abandonment in place or some other form of  
7 abandonment -- i.e., removal -- is or is not to be  
8 preferred.

9 The proper question is, in my submission, whether this  
10 Board should order the inclusion of the clause sought by  
11 GAPLO in the form of easement to be approved by the Board  
12 under section 97. And more specifically, the question is  
13 should the Board order today a clause which would mandate  
14 the method of abandonment -- i.e., removal -- some  
15 unspecified time in the future. And nobody sitting here  
16 today can say with any degree of confidence when that will  
17 be, be it decades from now or later, or what the science  
18 will tell us then about how a pipeline should be abandoned  
19 for the public interest generally.

20 And I say this. My submission -- I base my submission  
21 on, really, two related points. The first is the one I  
22 have articulated already, which is nobody knows today what  
23 is going to happen in the future, but the second reason is  
24 a more technical one, and that is that -- respectfully, in  
25 my submission -- the authority to determine the form of  
26 abandonment today or in the future properly rests, at least  
27 as the legislation is currently crafted, with the TSSA.  
28 And that is why I have given you the materials that I have

1 given you.

2 So if you have regard to the first material I gave  
3 you, which is the Technical Standards and Safety Act --  
4 actually, before we go to that, let me take you to the  
5 National Energy Board Act, section 74.

6 Section 74 of the National Energy Board Act is the  
7 provision that most closely resembles section 43 of the  
8 Ontario Energy Board Act.

9 Section 43 of the Ontario Energy Board Act, as you  
10 will be well familiar, is the section that deals with  
11 selling, leasing distribution systems and transmission  
12 systems, and has also restrictions on amalgamation.

13 So you will see in section 74 -- and what is  
14 interesting is that section 74 has provisions in 1(a), (b)  
15 and (c), which are roughly the same as those which can be  
16 found in section 43 of the OEB Act, but what it  
17 specifically has is a reservation of jurisdiction relating  
18 to abandonment to the operation of a pipeline. So you  
19 cannot, without leave of the board, abandon the operation  
20 of a pipeline.

21 So there is, at the National Energy Board level, two  
22 things that are important. The first is the Act  
23 specifically provides for the abandonment and the  
24 jurisdiction of the board, and it provides for an  
25 application, and then you will see that there is underneath  
26 that a mechanism at the National Energy Board Act. And as  
27 the witnesses talked about, you have to bring the  
28 abandonment application at the time you actually intend to

1 abandon the pipeline.

2 That compares to our Act, and our Act does not have in  
3 it a section comparable to section 74.1(d). What you have  
4 instead is the Technical Standards and Safety Act, 2000.  
5 And this is a bit of a funny Act because of where it came  
6 from historically.

7 But if you look at section 2, what you will see is that  
8 the Act applies with respect to, amongst other things,  
9 amusement devices, boilers, pressure vessels, elevating  
10 devices, and more importantly, it applies to fuels.

11 If you continue through the Act, you will see at  
12 section 36 the general power that you would find relating  
13 to the power to make regulations. And under section 36(1):

14 "The Minister may make regulations adopting by  
15 reference in whole or in part and with such  
16 changes as he or she considers necessary any  
17 code, standard, guideline, or procedure governing  
18 the matters set out in Section 2 and require  
19 compliance with the thing as adopted."

20 So that is the regulation power.

21 That takes you to O-Reg 2010, which I have also given  
22 you. O-Reg 2010, under the Technical Standards and Safety  
23 Act, is the regulation that deals with oil and gas pipeline  
24 systems.

25 And what you will see if you turn to section 2 -- it  
26 should be on page 3 of 9, under "Application" -- it says  
27 that:

28 "This regulation applies to the design,



1 construction, operation and maintenance of oil  
2 and gas industry pipeline systems that convey..."

3 And then, amongst other things, natural gas.

4 And then you have underneath -- you have general  
5 requirements for compliance:

6 "Every person engaged in an activity, use of  
7 equipment, process or procedure to which the Act  
8 and this regulation applies shall comply with  
9 this Act and this regulation."

10 And then importantly, you'll see under section 3.2:

11 "For the purpose of subsection 1, the reference  
12 to an activity, use of equipment, process or  
13 procedure includes but is not limited to design,  
14 construction, erection, maintenance, alteration,  
15 repair service, or disposal."

16 And that takes us to where we are today, which is what  
17 you saw earlier, which is K1.2, dealing with the draft  
18 standard.

19 The draft standard is important from this perspective.  
20 It is not important in that it tells us today how pipelines  
21 are going to be abandoned in the future. It does tell us  
22 about abandonment plans, and it does tell us information if  
23 we happen to be abandoning a pipeline later this year, how  
24 that would take place.

25 My point with respect to the standard is this. It  
26 tells us beyond doubt that the TSSA has the jurisdiction  
27 over abandonment and it is intending to exercise it. I  
28 don't know what they are going to do about abandonment 20,

1 30, 40 years ago -- from now. It could be that down the  
2 road people think this draft standard, if it becomes the  
3 standard, is or is not adequate.

4 You do not need to decide that question. You do not  
5 need to decide whether this standard addresses the concerns  
6 that you heard articulated from the witnesses.

7 I don't know whether it will or it won't. On its face  
8 it does address the issue of capping the pipeline so it  
9 wouldn't act as a drain for water. I get that. But I am  
10 not asking you to make any conclusions about whether it is  
11 the right thing to do or the wrong thing to do at this  
12 stage.

13 We only know for sure that the TSSA is alive to it,  
14 and it will be making a decision. And for that reason, I  
15 say it would be inappropriate and wrong for the Board to  
16 step in where the TSSA has the jurisdiction, and is clearly  
17 going about exercising it.

18 And so that is why, in my submission, section 97  
19 cannot be used as a workaround, effectively, for these  
20 provisions of the TSSA Act and O-Reg 2010/01.

21 I do say that the issue of pipeline abandonment is a  
22 live issue and it is a fluid issue. And even looking at my  
23 friend's materials this was referred to a number of times,  
24 and I cite this only to point out that is an emerging  
25 issue.

26 But you will have seen attachment 6 to GAPLO's  
27 evidence. I will give you the cite, so you needn't turn it  
28 up, but beginning at page 22 -- in fact, even earlier. If

1 you go to, for example, page 18 of GAPLO attachment 6, it  
2 begins by talking about conduit, what happens if you have  
3 left a pipeline in the ground and it acts as a conduit.

4 The next page, page 19, "Decomposition of pipeline  
5 material," it talks about what are the possibilities, the  
6 scientific evidence in relation to decomposition. Then you  
7 get to cleaning methods and disposal.

8 And ultimately, what you get to is that the board  
9 concludes -- it is not a conclusion of the board, but this  
10 study says it may be in some cases that in situ abandonment  
11 is appropriate. In other cases, in situ abandonment may  
12 not be appropriate.

13 My point is simply that we are a long way from knowing  
14 what is going to be appropriate in the future.

15 Union is going to live up -- because it has to and it  
16 is the right thing to do -- to whatever standards are in  
17 place. And if what is being sought is, as a condition of  
18 approval, you will comply with the law, whatever it is in  
19 relation to abandonment, by all means.

20 But I don't know what that is. I don't know what the  
21 science is going to be, and nobody does. But I do know who  
22 has the jurisdiction, and in my submission that is the  
23 TSSA.

24 Those are my submissions in relation to abandonment,  
25 subject to any questions in relation to them.

26 MS. FRY: I do have a question. Just to be clear, are  
27 you saying that on abandonment issues, the TSSA has  
28 exclusive jurisdiction so that the OEB would not be allowed

1 to deal with it? Or are you saying that because the TSSA  
2 has jurisdiction, the OEB should not deal with it?

3 MR. SMITH: The latter. There is no exclusive  
4 jurisdiction provision in the TSSA Act. I looked; I didn't  
5 find one.

6 MS. FRY: So is there anything that would help in  
7 either Act that you would point to as giving us guidance as  
8 to how the two Acts in that respect were intended to live  
9 together?

10 MR. SMITH: There isn't. I would just simply observe  
11 that it is apparent from the work that is being done at the  
12 TSSA that this issue is something they are alive to, and  
13 they have developed the appropriate committees and they are  
14 going to work on it. And they are clearly working on it.

15 And in the absence of some indication that they are  
16 failing to exercise their jurisdiction in some way, and  
17 there is a gap that requires it be filled by the Ontario  
18 Energy Board, I would say it would be wrong for the Board  
19 to step in, in this case.

20 But I am not saying that there is an exclusive  
21 jurisdiction clause in the TSSA, because there isn't. And  
22 I did think of that question.

23 The one thing I would say when it comes to the issue  
24 of abandonment -- and we did talk around this a little bit,  
25 but this is a situation where you do have another  
26 authority. That is the NEC, the Niagara Escarpment  
27 Commission.

28 And the Niagara Escarpment Commission has very broad

1 powers in relation to what does or does not happen in the  
2 Niagara Escarpment Commission.

3 I often think of the Niagara Escarpment,  
4 simplistically, as like a park. But it is not really,  
5 because there are people who live there and have farms  
6 there, and the NEC has certain powers in relation to their  
7 land.

8 It is very easy to imagine a situation in this case  
9 where, if my friends were correct, a landowner may request  
10 something and demand removal which the NEC would not  
11 approve. And in my submission, I don't think that setting  
12 up what is a potential conflict is, at this stage, good  
13 regulatory policy, when we don't know what is going to be  
14 the situation down the road.

15 There are going to be -- as this issue develops, no  
16 doubt -- 40, 50, 60 years from now, real issues relating to  
17 abandonment that will have to be dealt with in a public  
18 forum. I agree with Mr. Goudy to that extent. I think  
19 that some day we are going to have to deal with this, but  
20 we are going to know a lot more about it.

21 I do want to make just one passing observation in  
22 relation to the financing. There are different issues  
23 relating to paying for abandonment, but Union does, and is  
24 required to, collect money in its cost of service for,  
25 essentially, salvage and abandonment through its  
26 depreciation.

27 So that is happening, Mr. Goudy; it is not a  
28 question of it not happening.

1           If there are no further questions in relation to  
2   abandonment, let me just turn the page then to the issue of  
3   the letter of understanding. And again, I do want to  
4   express my regret that there was some part of today's  
5   hearing that may have descended into drafting. That is  
6   probably not the best use of the Board's time, and we  
7   accept that.

8           There were a number of matters that remained  
9   outstanding, and I don't think, from a technical  
10  perspective, I can do better than what we heard from the  
11  witnesses. And so I don't propose to summarize that, or to  
12  even really re-plough it; no pun intended.

13          I would like to say that as it relates to  
14  substantially and perhaps all of the issues that remain in  
15  dispute, it is -- ultimately, I think it comes down to what  
16  we have here is a situation where Union has a lot of  
17  experience. And that is not -- in no way -- meant as  
18  disrespectful to the witnesses who testified. But  
19  it has a lot of experience and scientific backing to what  
20  it has proposed.

21          Nobody is suggesting, at least on this side of the  
22  table, that people would not in the field listen to the  
23  soils consultant, or even the independent monitor, which  
24  was agreed to by Union and will be there and include GAPLO  
25  representation, and will also include representation from a  
26  member of Board Staff.

27          So to the extent there are issues that do develop,  
28  there will be both an opportunity for those to be raised,

1 and indeed as you heard from Mr. Wachsmuth, not just raised  
2 but escalated.

3 So this is a situation, from Union's perspective,  
4 where it wants to be very respectful of the farmers and  
5 landowners' knowledge of their property, and knowledge of  
6 their specific circumstances. And you heard from the  
7 witnesses on any number of occasions that for  
8 site-specific considerations, Union is open to discussing  
9 them, including them in schedule B, and there is a method  
10 to resolve them.

11 And ultimately, if Union can't resolve them, Union has  
12 to pay for them because it is required to under the Act, to  
13 compensate for loss.

14 I would also say that apart from that consultation  
15 that is going on, there is a broader consideration, which  
16 is Union has to work across a number of landowner  
17 properties. It wants to treat people equally.

18 In Union's submission, it is appropriate -- notwithstanding  
19 that it is going to consult, that it is appropriate that in  
20 some matters, for example over-wintering, it is appropriate  
21 that Union base its decision on the science, because if it  
22 doesn't base its decision on the science, there is an  
23 impact on how long they have to be on somebody's property,  
24 and that can extend, because of the way these properties  
25 are configured and because you have to migrate across  
26 properties, not just to the affected landowners but to  
27 adjacent landowners. And in my submission that is one  
28 reason why it is best for these kinds of decisions to be

1 left to the soils consultant, again with reference to the  
2 independent crop consultant with all of the rights to raise  
3 matters as appropriate.

4 So in my submission, we suggest that the letter of  
5 understanding be adopted as is, and as attached to the  
6 settlement agreement, subject -- and I have just not had  
7 the time to go through the transcript, but subject to those  
8 areas where we have worked our way through the issues as we  
9 have gone along and -- we can -- I don't know how you want  
10 me to address that, because I don't have detailed notes of  
11 every instance, but if you want me to I can provide that.

12 But there were a number of places -- the first two  
13 items we knocked off the list right away. Obviously we  
14 stand by those, and everything we conceded in the  
15 transcript, but other than that we -- I rely on the  
16 testimony of the witnesses today.

17 MS. HARE: I think Ms. Fry had a question.

18 MS. FRY: Yes, just one question of clarification.

19 You referred to the impact of over-wintering decisions  
20 on adjacent landowners, and my memory isn't perfect. I am  
21 not remembering any evidence on that. Can you help me out?

22 MR. SMITH: I will have to look at the transcript. It  
23 is apparent from...

24 MS. HARE: Is it the erosion you are referring to?

25 MR. SMITH: No, all I am observing is this. It is  
26 apparent from the Stantec -- and I will just give you the  
27 cite so you have it, but --

28 MS. FRY: Okay. Thank you.



1 MR. SMITH: -- it is apparent from the environmental  
2 report -- and maybe one of the easy ways to see it is if  
3 you look at the Stantec report, Exhibit -- it's tab E to  
4 the Stantec environmental report, figure 1.8. And what you  
5 will see -- and you should also have regard to Union's  
6 prefiled evidence, tab 13. I believe it's schedule 1, page  
7 7 -- it is up on the screen so you can see it there.

8 But what you have here and what is shown on the screen  
9 is you have Appleby Line on the left. The yellow line is  
10 actually the easement, so when Union is working the  
11 easement it is going along the easement, and the hedgerows  
12 -- and this is why you need to look at tab 13, schedule 1,  
13 page 7, because it sets out the property lines.

14 And the only point I am making, Member Fry, is  
15 decisions to -- different designs by different landowners,  
16 they're not isolated, because Union has to access  
17 properties, obviously, off of roadways. And so if you look  
18 at Appleby Line you would have to drive to get to the  
19 middle property unless there's some other way to get on the  
20 landowner's property; i.e., you pay additional compensation  
21 to get from some other county road.

22 The only right Union has is to move along the  
23 easement, and so you would have to go across the first  
24 landowner's property to get to the second landowner's  
25 property, and my simple point in relation to that is it is  
26 better to have one person making the decision who has  
27 expertise than have a series of people making a series of  
28 different decisions, because it is not just their decision

1 that is impacted; it is other people's decisions as well.  
2 That's the only point I was making there.

3 MS. FRY: So basically it is an argument based on the  
4 evidence, but you not referring to some specific evidence  
5 by Union that says --

6 MR. SMITH: No, no. That's right.

7 MS. FRY: -- that if "X" happens re: over-wintering,  
8 we have this problem?

9 You are basing it on existing evidence and  
10 constructing your argument?

11 MR. SMITH: Absolutely. I mean, as to the technical  
12 need to over-wintering, I can't help you. That is Mr.  
13 Wesenger's evidence and the Union Gas witnesses' evidence  
14 as to when they over-winter, and you will see in the letter  
15 of understanding this is not a question of black and white.  
16 It is not a question of my friend saying: Over-winter, and  
17 Union Gas saying: Over my dead body.

18 This is an instance of Union saying: We will over-  
19 winter if appropriate and based on our soil consultant's  
20 recommendation. And you heard the evidence from the  
21 witnesses that there may well be instances when that is  
22 appropriate.

23 But Union also would like the ability to, if  
24 appropriate, push ahead and try and finish its project if  
25 it believes -- and this is what Mr. Wesenger testified to -  
26 - if it believes the soil conditions are such that it is  
27 appropriate to go ahead.

28 And that is really the difference between our position

1 and my friend's position. It's: Is it at the election of  
2 the landowner, or should it be a more nuanced decision that  
3 has regard to a few more factors?

4 And our position is obviously the latter, and we  
5 understand our friend's position to be the former.

6 And I would just simply say I expect my friend is  
7 going to say something along the lines -- on this issue,  
8 something along the lines of: Well, we can expect the  
9 landowner to not ask for over-wintering in all cases. It  
10 is simply reserving the right to make that election.

11 And I respect that, and nobody is suggesting that  
12 people are going to act unreasonably.

13 But having said that, it is still appropriate for the  
14 ultimate decision to be for the constructor who has to get  
15 the job done but will have regard to the soils consultant,  
16 as opposed to the landowner, who will be consulted.

17 Those are my submissions.

18 MS. HARE: Thank you.

19 Mr. Goudy, how long do you think you will be in your  
20 submissions?

21 MR. JOHN GOUDY: I had estimated an hour when I  
22 provided the estimate to Ms. Crnojacki, and I would expect  
23 that I would be an hour if I were to do submissions at this  
24 time.

25 MS. HARE: All right. Just give us a moment.

26 Okay. Given the hour and not wanting you to start and  
27 not finish, then we are going to suggest your argument  
28 would be in written form, and similarly for Board Staff.

1 So do you think you would be ready with a written argument  
2 on Wednesday, March the 11th?

3 MR. JOHN GOUDY: Yes, I think that would be workable.

4 MS. HARE: Okay. Similarly for Board Staff?

5 MS. DJURDJEVIC: Yes, that will be fine.

6 MS. HARE: And then, Mr. Smith, for your reply, what  
7 would you suggest if you receive the written arguments on  
8 the 11th?

9 MR. SMITH: Tuesday or Wednesday of the next week  
10 would be fine. I am away and out of the country next week.  
11 Not on the moon; I am in the United States.

12 MS. HARE: The week of the 9th you are away?

13 MR. SMITH: Yes, the week of the 9th I am away, so I  
14 just would prefer it is not the Monday, because I will be  
15 just getting back into the office. I am sure I could  
16 manage the 17th or 18th. Obviously I would prefer the  
17 18th, but I am in your hands.

18 MS. HARE: Well, let's set it for Wednesday the 18th.  
19 So the schedule then will be the 11th for GAPLO and Board  
20 Staff, and the 18th then for Union Gas.

21 MR. SMITH: Thank you very much.

22 MS. HARE: Okay? Thank you very much to all  
23 participants. Thanks.

24 --- Whereupon the hearing adjourned at 4:52 p.m.

25


26

27

28



**An Opinion Report on  
Selected Topics in the  
Panhandle Reinforcement  
Pipeline Project LOU**



Jane Sadler Richards BSc(Agr) MSc PhD PAg  
Cordner Science

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October 21, 2016

## **Disclosure**

Cordner Science is an independent agricultural and environmental consultancy, which is owned and operated by the author. The consulting business operates from the author's farm, which is located within southern Ontario but not within the area under consideration in this report.

## **Disclaimer**

The author will not be held responsible or liable in any way for action taken by the reader or third party based on information contained in this document.

## Summary

Author: Dr. Jane Sadler Richards BSc(Agr) MSc PhD PAg Cordner Science

The nature of the Project is outlined as follows by Union Gas Limited in its Letter of Understanding (LOU), revision date May 11, 2016:

Union Gas Limited (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").

Within the context of the Project, Dr. Jane Sadler Richards, the author of this report was instructed to: provide expert opinion as to the appropriateness of mitigation measures proposed by Union Gas Limited and modified measures proposed by CAEPLA-PLC in the context of Union Gas's Project with respect to agricultural use of affected lands in four areas: soils handling; drainage; construction monitor; and joint committee (consisting of Union Gas and landowner representatives).

The expert's duty prevails over any obligation that may be owed to any party by whom or on whose behalf the author is engaged.

My opinions are based on a review and analysis primarily of the LOU proposed by the Company (Union Gas Limited, 2016) and an internal document prepared by the Panhandle Landowner Committee of the Canadian Association of Energy and Pipeline Landowner Associations (CAEPLA-PLC) indicating their proposed changes to the Company's LOU text (CAEPLA-PLC, 2016). Other documents were also considered as indicated in this report.

The opinions provided in this report are specific to the proposed text of the LOU and, therefore, do not lend themselves to generalizations or summary. The reader is referred to those sections of interest.

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## 1 AUTHOR INFORMATION

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Qualifications: Curriculum vitae is provided in Appendix A  
 In summary:  
 Formal education: BSc(Agr), MSc, PhD (Plant/Environmental Science);  
 Paralegal graduate certificate (graduation pending Nov2016)  
 Extensive training: Good Laboratory Practices (GLP); Ontario tribunal  
 adjudication; issues in agriculture, environment and sustainability  
 Extensive experience: more than 30 years working as a consultant,  
 scientist, agriculture extension specialist and/or farmer on rural  
 agricultural, environmental and sustainability issues

Areas of expertise: Agriculture soil, water and crop management  
 Agriculture and environment monitoring  
 Field scientific practice

## 2 INSTRUCTIONS

### 2.1 Project

The nature of the Project is outlined as follows by Union Gas Limited in its Letter of Understanding (LOU), revision date May 11, 2016:

Union Gas Limited (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.

In this report reference to the Project relates to the work outlined in the LOU. The Project also may be referred to as the “Panhandle Loop” or the “Panhandle Reinforcement - Dawn to Dover Station”. The Project is also referenced as OEB EB-2016-0186.

## **2.2 Letter of Understanding (LOU)**

The proposed Letter of Understanding (LOU), revision date May 11, 2016, also indicates that it:

represents the results of negotiations between Union Gas Limited 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.

The proposed LOU (revision date May 11, 2016) is an 18 page document that includes 30 sections itemized over 11 pages and seven schedules itemized as appendices over seven pages.

## **2.3 Request to Author**

This report is the result of a request made to Dr. Jane Sadler Richards PAg, Cordner Science by the Panhandle Landowner Committee (PLC) of the Canadian Association of Energy and Pipeline Landowner Associations (CAEPLA).

Within the context of the Project, Dr. Jane Sadler Richards, the author of this report was instructed to:

provide expert opinion as to the appropriateness of mitigation measures proposed by Union Gas Limited and modified measures proposed by CAEPLA-PLC in the context of Union Gas's Project with respect to agricultural use of affected lands in four areas: soils handling; drainage; construction monitor; and joint committee (consisting of Union Gas and landowner representatives). Analysis will include comparison of specified sections of the Union Gas proposed Panhandle LOU with equivalent provisions in other recent project documents.

The specified sections of the Union Gas proposed Panhandle LOU included:

- Section 5 – Staking of Workspace;
- Section 6 – Topsoil Stripping;
- Sections 7 and 15(xix) – Depth of Cover;
- Section 9 – Topsoil Replacement, Compaction Removal and Stone Picking;
- Section 10 – Drainage Tiling; and
- Schedule 6 – Wet Soils Shutdown.

The Panhandle LOU did not include specifics related to:

- construction monitor; and
- joint committee.

## 2.4 Acknowledgment of Expert's Duty

As the author of this report, I understand and acknowledge that I have a duty to provide opinion evidence that is fair, objective and non-partisan and related only to matters within my areas of expertise. I will provide such additional assistance as the Ontario Energy Board (OEB) may reasonably require, to determine a matter in issue. This duty prevails over any obligation that may be owed to any party by whom or on whose behalf I am engaged. The OEB Form A to this effect is signed and included at Appendix B.

## 3 METHOD

My opinions are based on a review and analysis primarily of the Letter of Understanding (LOU) proposed by Union Gas Limited (the Company) (Union Gas Limited, 2016) and an internal document prepared by CAEPLA-PLC indicating their proposed changes to the Company's LOU text (CAEPLA-PLC, 2016). Equivalent provisions in other project documents were also reviewed, which provided an appreciation of what had occurred in those projects. Selected text from documents from three projects were considered for comparison purposes during the preparation of this report including the: NPS 48 Strathroy Lobo Pipeline Project, Union Gas; Lake Huron Pipeline LOU (LHPLA & LHPWSS, 2012); and HAMILTON MILTON (OEB ORDER), which were provided in or in addition to the CAEPLA-PLC comparison document (CAEPLA-PLC, 2016). From time-to-time, I referred to additional documents all of which included information that informed my opinion (Cordner Science, 2008) (Union Gas Limited, 2009) (Stantec, 2016) (Union Gas Limited, 2016a) (Union Gas Limited, 2016b).

A road trip/windshield survey was not undertaken at this stage of the proceeding; I have worked in southern Ontario for several years and I am familiar with the rural landscape in question. Individual properties were not visited and this opinion report draws on general knowledge and experience, not specific knowledge of each property affected.

The Opinion subsections are divided into two parts. The first part includes the Panhandle LOU proposed text shown as: Company black or orange dash underline; and CAEPLA-PLC blue underline. The lines of the proposed text are numbered and referenced as needed in the second part below, which includes my opinion.

## 4 OPINION

### 4.1 General

The LOU is a key document outlining the expectations and agreements between the Company and each landowner. Furthermore, the document must address a range of complex issues that involve the valuable property of each party - property that must co-exist for decades to come. My role is to provide my opinion as to the appropriateness of mitigation measures proposed by Union Gas Limited and modified measures proposed by CAEPLA-PLC, in the context of Union Gas's Project, with respect to agricultural use of affected lands in four areas: soils handling; drainage; construction monitor; and joint committee.

#### **Standard Operating Procedures**

In general, and relative to the topics I have reviewed, the LOU should provide another level of detail for those significant activities that are key elements of the understandings addressed in the LOU. This could be accomplished by reference in the LOU and provision of a separate document that includes the standard operating procedure (SOP) for the activity. Written SOPs bring a new level of clarity to communications between the parties and those who actually do the work. SOPs provide a base of understanding from which activities, such as topsoil handling, can be implemented by the Company and their contractors; observed by landowners, inspectors, and the construction monitor; discussed amongst everyone involved; and, when needed, varied to meet circumstances in the field.

#### **“If requested by the landowner”**

The LOU, as proposed by the Company, places a significant onus on the landowner to request additional information and action by the Company. A key-word search of the entire document reveals the landowner must make a request 18 times if they want additional information or action from the Company. Company requests are related to contractors and those appear 2 times in the LOU. Of the 18 landowner options to request in the LOU, 8 appear within the sections I have reviewed, and within those sections, CAEPLA-PLC has proposed an additional 3 landowner requests.

My point is that the landowner has many opportunities to influence and fine-tune their working relationship with the Company and the final outcome of the work done by the Company. In my opinion, these opportunities should be consolidated into a checklist or similar document so the landowner is aware of them in their entirety and can decide whether to make a request or not, in the best interest of their property.

#### **Consistency, definitions, diagrams**

In the sections I reviewed I found that the terms used and the descriptions of the work in the construction area varied to the point where I was not always certain what was meant. For example, section 6, Topsoil Stripping, includes the terms: over the pipeline trench, subsoil storage area, easement, and temporary land use area. Alternatively, the Company's diagram provided in its application to the Ontario Energy Board (OEB) entitled “Panhandle Typical Right of Way Cross Section” (Union Gas Limited, 2016a) (Appendix C) shows the construction area (which the Company identifies as the ‘right of way’ in the diagram title) includes both the easement and the temporary land use area - and that, typically, topsoil is stripped from both areas not just over the pipeline trench and subsoil storage area.

My point is that landowners must choose their options for handling soil on their property. Since the LOU is the written agreement between parties, the text of the LOU should be very consistent and provide definitions and diagrams whenever possible.

## 4.2 Soils Handling

### 4.2.1 5. Staking of Work Space

#### **Proposed text (LOU pg3)**

---

#### **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 bright orange. 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.

#### **Opinion**

---

##### Cross reference:

- LOU pg18: Schedule 7 Pipeline Removal Process (Existing NBS 16), 2. *The permanent and temporary easements are staked by a Surveyor.*

##### Proposed measures:

- Staking of the work space is essential to understanding the construction boundaries and related soils handling and drainage needs during the Project.
- The Company's proposed text in this section is reasonable and is silent on the text proposed by CAEPLA-PLC.
- CAEPLA-PLC proposes the addition of text (lines 5; 12,13) that is the same as that previously found in the NPS 48 Strathroy Lobo Pipeline Project plus new text (lines 7,8). The CAEPLA-PLC proposal is reasonable in my opinion.
- Additional actions should be considered for the reasons provided.

##### Additional actions:

- Initial staking of the work space appears to occur prior to removal of the 16" pipe (see Schedule 7, 2. *The permanent and temporary easements are staked by a Surveyor.*). All requirements related to this task should be consolidated in one place within the LOU, or at a minimum, requirements should be cross-referenced.
- The Company should confirm the meaning of *temporary easement* relative to *temporary land use area* and whether this includes all additional temporary uses of land, for example, topsoil storage, materials storage (fence posts, drainage tile, etc.), and the haul route for the excavator carrying the

16" 50' pipe lengths to the scrap bin at each road crossing on the temporary land use area (LOU Schedule 7, item 10, pg18).

- Once the surveyor sets the stakes there should be a SOP that provides guidance on maintenance, removal and replacement of the stakes, to ensure the stakes are put back in the correct location, and recovery of the stakes, to ensure none are left in the field at the end of construction.
- The surveyor should document (and probably is documenting) the location of each stake using GPS technology. Making this data available in a usable format to Project workers and landowners could provide many benefits. For example, GPS coordinates could assist in locating, removing and replacing stakes as needed during and after construction operations. GPS coordinates would improve the ability to find a stake if it is not visible due to crop or other plant growth or if it is inadvertently knocked over during the construction period. For some landowners having GPS coordinates may help them avoid 'picking up' a stake and damaging their combine during harvest. Also, GPS coordinates would provide information that could be used by both parties to develop base maps and assist in the long term monitoring of conditions on and off the easement and temporary land use areas.
- The parties should confirm that the stakes are made of wood, not some other material, for example, wire, metal, plastic. If a stake is not recovered at the end of construction operations i.e., it is lost in the field, wood is biodegradable and, if a wooden stake is inadvertently picked up by agricultural machinery, such as a combine, it may cause less damage than other types of stakes.

#### 4.2.2 6. Topsoil Stripping

##### **Proposed text (LOU pg3)**

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#### **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 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.

Topsoil stripping will be conducted using an excavator and not a bulldozer.

Topsoil previously disturbed by pipeline construction will be stripped and piled separately from virgin topsoil, with one metre separation between piles.

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 a landowner a mulch layer will be provided between the existing topsoil and the stripped topsoil piles 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.

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.

### **Opinion**

---

#### Cross references:

- LOU pg18: Schedule 7 Pipeline Removal Process (Existing NBS 16), 4. *Topsoil is stripped and stock-piled off to the side, on top of topsoil.*

#### Proposed measures and additional actions:

- During the Project, topsoil stripping is an important step in soils handling. It is extremely important to protect topsoil quality and quantity because topsoil is a key resource in agricultural crop production. Topsoil is easily degraded if not managed appropriately when moved in bulk.
- The measures proposed by the Company and CAEPLA-PLC require clarification as outlined below.
- Additional actions should be considered for the reasons provided.
- A 'Typical Cross Section' diagram (Appendix C) should be attached to the LOU to ensure all parties understand the terminology, anticipated lay-out of the construction area, and the topsoil management plan. For this Project, two typical diagrams may be required to clarify how the topsoil is managed, first, when removing the existing NPS 16 pipeline and, second, when constructing and installing the NPS 36 pipeline. These diagrams could be modified to show any specific differences in soil handling that landowners request. (See also section 4.2 above.)
- Note the diagram referred to above and the text in section 6 do not always correspond and therefore the accuracy of the text and diagram should be confirmed. In some cases it appears that consistent use of standardized terms could resolve ambiguity.

For example,:

- the text indicates topsoil will be stripped from over the pipeline trench and adjacent subsoil storage area (lines 2,3) but does not mention how this stripping fits in with the stripping that will be done during the removal of the existing NPS 16 pipeline (see Schedule 7);
- further down, the text indicates the Company will strip topsoil across the entire width of the easement (line 9) if requested by the landowner, but it is not clear how this fits with stripping topsoil from the working side area, which, according to the diagram, includes easement and temporary land use area;
- the text indicates the topsoil will be piled adjacent to the easement and temporary land use areas, (lines 3,4) which raises a question as to where the topsoil actually will be piled;
- the text indicates one topsoil pile ~10 m wide (line 4) where the diagram (Appendix B) indicates 2 topsoil piles (one on the far edge of each side of the temporary land use areas), which together are ~14 m wide.
- Separation of topsoil from other soil is important to maintain topsoil quality. CAEPLA-PLC proposes a one metre separation (line 5) zone, which should be adequate for this purpose. This separation distance is specified in the Company diagram (Appendix C).  
Care should be taken to observe how the soil behaves when piled, as some soils flow more than



others, making it difficult to maintain a one metre separation zone in the area allotted for stockpiling soil. The parties should develop contingency plans for this circumstance to minimize in-field discussion about the best way to maintain soil separation.

- The text indicates the Company recognizes that due diligence is required to ensure topsoil and subsoil are not mixed when placed in vertical piles. However, due diligence is even more important in a horizontal direction when topsoil is separated from subsoil across the entirety of the construction area. Depth of topsoil may vary within and across fields for a number of reasons and topsoil stripping should accommodate this variability.

Therefore, it is imperative that the Company provide (or develop, as the case may be) a SOP on how stripping actually will be accomplished, taking into consideration, but not limited to, field topography, soil type, topsoil depth, soil cover, suitability of machinery/equipment, skill of machine operator, need for real-time ground-level operator guidance when stripping in the topsoil/subsoil transition zone, need for a small soil windrow of mixed top/subsoil stripped from the transition zone, and so on. (See also section 4.2 above.)

- The Company indicates, 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 (lines 18,19). This raises a question as to why a landowner would request this practice, which, on its face, would be detrimental to topsoil quality. With some investigation by the parties, there may be an opportunity to create circumstances where this practice is not requested.
- CAEPLA-PLC's proposal that an excavator and not a bulldozer (line 13) be used to strip topsoil represents an element that should be addressed in the soil stripping SOP mentioned above. I have no further comment on the suitability of each type of machinery as this is beyond my expertise.
- CAEPLA-PLC's proposal to separately strip and pile topsoil previously disturbed by pipeline construction away from virgin topsoil (lines 15,16) is reasonable but this action may not be required across the entire pipeline. It should be noted that historically the permanent easement has been subject to construction of two pipelines (NPS 16, NPS 20), which may have impacted topsoil quality. The width of the disturbed area versus virgin (undisturbed) topsoil would need to be determined. There are options for determining if separate stripping and piling is necessary to preserve topsoil quality. These include, for example, leaving it to the landowner to decide, comparing organic matter content of composite topsoil samples on and off the easement, and collecting paired samples on and off the easement to determine, using simple statistics, if there is *in fact* a difference in organic matter content between areas in the field.
- CAEPLA-PLC's proposal that the landowner be given the option of having a mulch layer provided where a crop is not present (lines 21,22) to separate piled topsoil from undisturbed topsoil is reasonable and is the same text as that previously found in the NPS 48 Strathroy Lobo Pipeline Project. If requested by the landowner, the nature and application of a typical mulch layer should be provided in writing and reviewed between the Company and landowner so they can agree on or vary expectations as appropriate. Alternatively, this could be described in a section of the SOP contemplated above.
- CAEPLA-PLC's proposal that, 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. (lines 24,25), which is the same as that previously found in the NPS 48 Strathroy Lobo Pipeline Project, may be reasonable under certain circumstances for this Project and, therefore, requires clarification. For example, the Project route includes a significant amount of clay in the soil profile.



As described in the above text, presumably, blue and yellow coloured clay are subjective observations made by the landowner and the Company (a soils specialist may describe ‘blue clay’ as ‘grey, or drab grey to light grey clay’). It is unreasonable, as written, to expect the Company to remove all ‘blue’ clay from the easement lands especially when it may be an inherent characteristic of the landowner’s property. However, it should be noted that some subsoil will be trucked off the easement because it has been displaced by the installed NPS 36 pipeline. This circumstance presents an opportunity for the landowner to specify what subsoil they prefer removed. In this case the Company could accommodate the landowner’s request but the Company should not be required to remove more subsoil than necessary to deal with excess subsoil.

- The following two statements (line 28 and lines 28,29) are proposed by the Company and also have been included in the Strathroy Lobo and the Hamilton Milton Projects. The text is also similar to that in the Lake Huron Project.
- The text on over-wintered (line 28) topsoil could benefit from examples of when this may apply.
- The over-wintering statement indicates the Company will replace the topsoil such that the easement lands are returned to surrounding grade (lines 28,29). This statement requires clarification. Does this statement mean that if the stockpiled topsoil is not enough to bring the easement lands to grade then topsoil will be imported? If yes, then this should be indicated with reference to a SOP for the importation and placement of topsoil.

#### 4.2.3 7. and 15 xix) Depth of Cover

##### Proposed text (LOU pg3&7)

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#### 7. Depth of Cover

The Company will install the pipeline with a minimum of 1.2 OR 1.5 metres of cover, except where bedrock is encountered at a depth less than 1.2 OR 1.5 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 OR 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.

And

#### 15. Covenants

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 1.2 metres the Company shall restore depth of cover to a minimum of 1.2 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.

#### Opinion

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##### Proposed measures:

- Depth of cover of soil over the pipeline is important for safety reasons and to ensure normal farm practices can be carried out on the surface of the field above the pipeline. Disturbed soil is prone to

subsidence and other physical processes, for example, soil erosion due to wind, water and tillage. These processes can decrease the amount of soil cover over the pipeline with time.

- The following outlines the proposed texts on depth of cover with my additional comments.
- The Company proposes in section 7 that depth of cover at pipeline installation should be 1.2 m (lines 2,3) and, where bedrock is encountered at installation, not less than 1.0 m below grade (line 4). The Company goes on to propose that they will provide for additional depth of cover (lines 8,9) to accommodate current (line 7) processes such as ... if necessary and in consultation with the landowner (line 6).
- CAEPLA-PLC proposes in section 7 that depth of cover at pipeline installation should be 1.5 m (lines 2,3) and that the depth of cover also accommodate facilities such as drainage and/or (line 7) processes such as ... .
- When compared, the pipeline installation depth of cover identified in the Strathroy Lobo and the Hamilton Milton projects was 1.2 m while 1.8 m was the threshold cover for the Lake Huron Pipeline.
- With regard to restoration of depth of cover, the Company proposes in section 15 xix) that if the landowner requests, the Company will conduct a survey and provide the information to the landowner. The Company's proposed text is silent on what action they will take if the depth of cover does not meet a threshold depth, except to say they will ensure soil cover is at least 0.6 m in areas where the top of the pipe is at or below bedrock (lines 15,16). However, I note bedrock will not likely be encountered during construction on this Project as the estimated overburden ranges from 10 to 30 m.<sup>1</sup>
- With regard to restoration of depth of cover, CAEPLA-PLC proposes in section 15 xix) that the Company shall restore depth of cover to a minimum of 1.2 metres with the importation of topsoil or by lowering the pipe (lines 14,15) in agricultural areas where it is determined that cover over the pipeline is less than 1.2 metres (lines 13,14).
- When compared, the depth of cover that will be restored in the Strathroy Lobo and the Hamilton Milton projects is to 0.9 m (3 ft) while 1.8 m is the depth of cover that will be restored or other mitigation measures will be used for the Lake Huron Pipeline. Restoration is accomplished by importation of topsoil for all three projects and, as an additional option in the former two projects, lowering of the pipe.
- My review of the proposed measures indicates that all parties want to ensure that adequate cover is established when the pipe is installed and that adequate cover is maintained as the pipeline easement is reintegrated and used under normal farm practice. In my experience it is often important when monitoring environmental conditions to establish threshold values that trigger action. In this case, establishing a threshold depth of cover for pipeline installation and maintenance would ensure the integrity of the agricultural field and the quality and quantity of the soil resource are protected.
- The Company indicates that it will provide for additional depth of cover (lines 8,9) where circumstances warrant. The text implies that additional topsoil will be brought in, however, I can also envision topsoil being stripped and subsoil brought in. The Company should clarify what options are available for increasing the depth of cover and the text should refer to a SOP for importation and placement of topsoil and/or subsoil. The SOP would expand considerably on the general statement in

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<sup>1</sup> Panhandle Reinforcement Project: Environmental Report FINAL REPORT section 3.3.1 Bedrock Geology and Drift Thickness, Stantec Consulting Ltd., File No. 16091079 June 2, 2016; Filed: 2016-06-10 EB-2016-0186 Exhibit A Tab 10 Schedule 1 Page 29 of 35

section 15 xx) (LOU pg8) which says, “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.”

#### 4.2.4 9. Topsoil Replacement, Compaction Removal and Stone Picking

##### **Proposed text (LOU pg4)**

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#### **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) OR 50 mm (2 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 cultivation OR tillage themselves, at the Company's expense (see Schedule of Rates attached as Schedule 3).

For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than 4 inches OR 2 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.

#### **Opinion**

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#### **9. Topsoil Replacement, Compaction Removal and Stone Picking**

##### Cross references:

- LOU pg18: Schedule 7 Pipeline Removal Process (Existing NBS 16), 12. *A dozer or exactor with a clean up bucket, backfills the remaining ditch and levels it off.*

##### Proposed measures:

- During the Project, site remediation involving subsoil and topsoil replacement, compaction removal, and stone picking are important steps in soils handling.
- The measures proposed by both parties are appropriate; however, minimum size of stones to be picked and type of tillage require clarification.

- With regard to stone picking, both parties agree to pick stones to a size and quantity consistent with the adjacent field (lines 9,10); however, the parties differ in the minimum diameter size of stone to be picked i.e., the Company proposes 100 mm (4 inches) (line10) and CAEPLA-PLC proposes 50 mm (2 inches) (line10). Minimum diameters of 50 mm and 100 mm were in place for the Strathroy Lobo and Lake Huron pipeline projects, and the Hamilton Milton project, respectively.
- In the author's opinion, when it comes to minimum size of stone to pick, there is not a 'one size fits all' threshold. In this situation (and unlike the situation discussed earlier for depth of cover over the pipe), choosing a minimum diameter size of stone threshold can lead to absurd conditions for crews picking stones in the field, especially when the conditions are inherently gravelly. There is a need to objectively assess the size and quantity of stones in the adjacent field. A SOP should be developed to cover this circumstance and, at the same time, the circumstance arising out of the last statement in this section, where the Company indicates it will return to pick stones in the years following where there is a demonstrable need (lines 26,27). Assessment options in a SOP include, but are not limited to, counts of stones/m<sup>2</sup> or counts of stone intersects along a knotted-rope, these options are similar to quick and well-developed methods for assessing weed pressure or crop residue cover in agricultural fields.
- With regard to tillage, the Company proposes the term cultivation (line 21) while CAEPLA-PLC proposes the term tillage (line21). Since cultivation is a type of tillage, the modifications and qualifications i.e., cultivate, chisel plough and/or deep till (lines 20,21) the easement area, proposed by CAEPLA-PLC are reasonable.

Additional actions:

- For greater clarity, section 9 should be re-titled to include: [Subsoil and] Topsoil Replacement, Compaction Removal and Stone Picking
- As in previous sections, the Company should clarify whether easement (lines16,20) in this section means the entire construction area, referred to in the diagram as permanent easement and temporary working area, or in fact only the easement area. If the latter, then additional discussion is required. The diagram indicates traffic will occur on the temporary working area and therefore soil compaction should be addressed within the entire construction area.
- The Company indicates that it will perform compaction testing (line16); however they have not provided enough detail to determine the suitability of their testing method(s) nor a clear indication of how the data will be used to assess compaction or what outcome would trigger additional action. I support the use of objective monitoring that has a clear purpose and sound scientific basis, but I require additional detail to provide an opinion on the proposed compaction testing. A SOP for compaction testing should be referenced in the LOU and provided in a separate document.

#### 4.2.5 SCHEDULE 6 Wet Soils Shutdown

**Proposed text (LOU pg17)**

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**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 the assistance of the construction monitor, the right-of-way conditions on agricultural lands are such that construction would have an adverse affect **OR** effect 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 **OR** 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. [In this event, additional damages will be paid as a result based upon 50% of the disturbance payment.]

**OR**

[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 damages under the LOU. The 150 % payment does not affect the landowner's right to topsoil replacement where crop loss exceeds 50 % in the fifth year following construction.]

## Opinion

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### Cross references:

- LOU pg18: Schedule 7 Pipeline Removal Process (Existing NBS 16), which involves construction activities where wet soils shutdown could apply

### Proposed measures:

- During the Project, wet soils shutdown is critical to limiting the severity of soil compaction due to construction activities, which, if limited, improves the potential for successful remediation of compaction when construction activities cease. Also, moving and tilling soil when it is too wet decreases soil quality by affecting other soil characteristics, for example, soil aggregate size and seedbed preparation.

### Additional actions:

- In Schedule 6 the proposed practices for wet soils shutdown break down into three topics as listed below. I will address the first two topics as they fall within my instructions.
  - i) Determination of soil wetness i.e., how to determine if soil is too wet for planned construction activities to occur/continue;
  - ii) Who is the decision maker i.e., who will make the actual decision to shut down, limit, or carry on planned construction activities in those areas determined to be too wet; and
  - iii) Compensation i.e., what compensation is due to a landowner when construction activities (limited or full) go ahead anyway, once a determination is made that wet soil conditions exist.

#### **i) Determination of soil wetness**

- Schedule 6 provides very limited information on how soil wetness would be determined. The wording proposed by the Company suggests that judgment (line 9) is the key basis for the determination of soil wetness, supported by knowledge and visual observations related to:
  - 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 (lines 15-17).

And when

- soils would have sufficiently dried (lines 19,20).

Additionally, inspectors are described as senior (line 8), which suggests they have some experience on which to base their judgment.

If the Company has a more detailed SOP available that provides guidance to inspectors then this should be referenced and made available to landowners for their review. If such an SOP does not exist then one should be developed and/or a study conducted to determine best practice.

On its face, there are too many omissions and deficiencies in the Schedule 6 methodology for me to explain within the scope of this report. However, to provide the reader with some indication of my concerns, following are a few key comments.



To begin with, the method, as described, relies completely on a subjective assessment of the conditions; no objective data are mentioned, not even the amount of rainfall within the previous 24 hours. While there is no doubt that experience leading to good judgment is important, there is also no doubt that good decisions are supported by sound scientific fact. These facts can be drawn from what we already know about the characteristics of the different soils (topsoil and subsoil) that are located along the 40 km length of the Project, and from real-time data collected in the field in-and-around the wet soils conditions. For example, in simple terms, clay soils tend to be more difficult to manage under wet conditions than sand soils. This ‘fact’ opens up a number of if/then possibilities related to wet soils conditions that could be described in a SOP. Similarly, soils have inherent abilities to absorb rainfall depending on how much is received and how fast it comes down. At a minimum, rainfall data should be recorded along the length of the Project (rainfall can change significantly within short distances), cross-referenced with the water absorption characteristics of the soils along the length of the pipeline, and this information used to support decisions made. Methods for determining actual soil moisture conditions should be assessed to determine which technology(s) provides the best real-time data for different soil types, conditions and timelines.

## ii) Who is the decision maker

- The following opinion relates specifically to the decision-maker roles proposed by the Company and CAEPLA-PLC with regard to wet soils shutdown. My overall opinion related to the construction monitor and joint committee roles is found in later sections.

### Role of the Construction Monitor

The Company proposes that [Company’s senior inspectors](#) (line 8) determine whether to prohibit construction activities due to wet soils conditions and that [Company representatives](#) (line 18) determine when soils are dry enough to commence construction activities.

CAEPLA-PLC proposes that [inspectors or other Company representatives and other members of the with the assistance of the construction monitor as required](#) (lines 10,11) determine whether to prohibit construction activities due to wet soils conditions and that [Company representatives and other members of the Joint Committee with the assistance of the construction monitor](#) (lines 18,19), determine when soils are dry enough to commence construction activities.

The Company senior inspectors and the Construction Monitor represent ‘on-the-ground’ technical expertise. Individuals in these roles bring different levels and intensities of experience to the task of assessing wet soils conditions under a range of agricultural and pipeline construction circumstances. It seems to me that the land and the construction project would benefit most if the technical expertise of these individuals could be pooled when determining if soil is too wet for planned construction activities to occur/continue.

Issues arise, however, when these individuals disagree and the outcome is that construction work proceeds. This type of disagreement may happen often - or not at all depending on many factors. The SOP mentioned above should include a mechanism for either resolving disagreement or, if that is not possible, documenting and tracking it for future reference. The SOP should also provide for joint training of Company inspectors and Construction Monitors on the SOP’s requirements. Contractors and others may also benefit from this training as shutdown decisions affect the entire workplace.

For greater clarity, in my opinion, the role of the Construction Monitor in circumstances involving Schedule 6 Wet Soils Shutdown should be to act jointly with Company inspectors to technically assess and determine wet soils conditions and the need to shut down, limit, or carry on planned construction activities.

#### Role of the Joint Committee

The Company proposes that Company senior inspectors (line 8) or representatives (line 18) determine wet soils conditions and the likelihood of adverse affects on soils due to construction activities and, if so, the contractor is prohibited from starting construction activities (lines 12,13).

CAEPLA-PLC proposes that Wet Soils Shutdown issues shall be decided by the Joint Committee with the assistance of the construction monitor as required (line 5,6). Further on, the CAEPLA-PLC proposed text suggests a more active role for the Joint Committee in making real-time decisions about whether to shut down or not (lines 10,11; 13,14; 18,19; 28,29).

Determinations of wet soils conditions and decisions to proceed, limit or shutdown construction activities occur early in the morning and throughout the day and evening as needed. In my opinion, members of the Joint Committee are best able to consider issues about decisions after they have been taken in the field and to then decide what follow up action is required, if any. The CAEPLA-PLC proposal, as written, suggests to me that members of the Joint Committee will be ‘on call’ every working day to make proceed/limit/shutdown decisions as they arise. I note the reference to the assistance of the Construction Monitor (lines 5,6; 10,11; 14, 19, 28,29) . As outlined above, in my opinion the land and the construction project, and therefore the Joint Committee, would benefit from actively accessing the expertise of the Construction Monitors. This expertise would be available to the Joint Committee when issues are discussed. (See above regarding the role of the Construction Monitor.)

For greater clarity, in my opinion, the role of the Joint Committee in circumstances involving Schedule 6 Wet Soils Shutdown should be to address and resolve issues arising from in-field decisions regarding wet soils shutdown. The Joint Committee should not be making wet soils shutdown decisions in real-time, which are, of necessity, linked to ever-changing field conditions.

## 4.3 Drainage

### 4.3.1 10. Drainage Tiling

#### **Proposed text (LOU pg4)**

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- 1 **10. Drainage Tiling**
- 2 The Company will repair and restore all field drainage systems and municipal drains impacted by
- 3 construction to their original performance. The Company will be responsible for the remedy, in
- 4 consultation with the Landowner, of any drainage problem created by the existence of the pipeline
- 5 present and future. The Company will consider reasonable requests by the Landowner to construct
- 6 additional tile runs near damaged lands. The Company will be responsible for any defects in the
- 7 integrity and performance of tile installed or repaired in conjunction with construction, operation or



8 repair, provided the defects are caused by the Company's activities, faulty materials or workmanship.  
9 The Company guarantees and will be responsible forever for the integrity and performance of such tile  
10 as well as any other drain tile or municipal drain compromised by the Company's activities, including  
11 future maintenance operations and problems caused by the Company's contractors, agents or assigns.  
12 Where the Landowner, acting reasonably, believes that there may be a drainage problem arising from  
13 the Company's operations, the Company will perform an integrity check on any tile construction/repair  
14 crossing the pipeline, and repair any deficiencies to the Landowner's satisfaction.

15  
16 The Company will retain the services of a qualified independent drainage Consultant. The Consultant  
17 will work with each Landowner prior too, during and after construction. The Consultant will be  
18 responsible to gather as much background information from each Landowner prior to construction as  
19 available, and with this information in conjunction with the Landowner they will determine whether  
20 there is pre-construction, post construction and/or temporary tile construction required on their land.  
21 The Consultant will provide where requested each Landowner with a tile plan for their review and  
22 approval prior to any installation of tile. The installation of tile will only be performed by a licensed  
23 drainage contractor to ensure that all drainage best practices are used. The Company will consult with  
24 the Landowner and mutually develop a list pf licensed tile drainage contractors from the area to bid on  
25 the work. All installations may be inspected by the Landowner or his/her designate prior to backfilling  
26 where practicable. The Company will provide the Landowner or his/her designate advance notice of  
27 the tile repair schedule. The Consultant will incorporate any professionally designed drainage plans  
28 obtained by the Landowner for future installation. If the Landowner intends to install or modify a  
29 drainage system but has not yet obtained professionally designed plans, the Consultant will work with  
30 the Landowner accordingly.

31  
32 Once the Consultant has reviewed all the drainage background provided to them they will proceed in  
33 developing pre-construction tiling plans where required. The purpose of preconstruction work is to  
34 ensure that the pipeline work does not interfere or cut off any adjacent subsurface drainage. In  
35 conjunction with the Landowner the Consultant will design an appropriately sized header tile  
36 (interceptor drain) which will be installed 1 m outside the easement and temporary land use limits by  
37 trench method in order to minimize the number of tiles crossing the pipeline easement. All intercepted  
38 tiles will be connected or end plugged accordingly. By installing the main outside the easement limits  
39 the Company can guarantee the integrity of the existing drainage system during the construction  
40 period. The Consultant/Landowner will be responsible for identifying to the pipeline contractor as  
41 reasonably possible any existing tiles 150 mm or greater crossing the easement. The Company will  
42 ensure that any such crossings will be temporarily repaired across the trench line and maintained  
43 during the complete construction period until post construction work can repair them permanently. The  
44 Company where possible will expose any such tile crossings prior to pipeline trenching operations to  
45 obtain an exact invert depth and ensure that the pipeline is not going to conflict with them.

46  
47 During construction the Consultant will be following the trenching operations collecting / monitoring  
48 and ensuring that the drainage is maintained accordingly. Once the Consultant has collected and  
49 reviewed all the survey information they will develop a post-construction tile plan and profile for each  
50 affected owner. These post construction tile plans will show the Landowner exactly how many tiles are  
51 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.

## Opinion

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### Cross references:

- LOU pg18: Schedule 7 Pipeline Removal Process (Existing NPS 16), which involves construction activities where drainage may be impacted

### Proposed measures and Additional actions:

- The focus of this section is on ensuring that drainage is maintained.
- The Company's proposed plans appear to be reasonable in this regard.
- CAEPLA-PLC did not propose any changes to the Company's proposed text.
- Throughout this section the qualified independent drainage Consultant (line 16; first reference) is relied upon to develop and ensure that drainage plans and installations are properly done. Based on the description of the responsibilities and work to be done by the drainage Consultant, coupled with the fact that approximately 92% and 3% of the proposed easement length is systematically and randomly tiled, respectively,<sup>2</sup> it may be difficult for one person to service the needs of all landowners, drainage contractors and Company personnel along the 40 km length of the Project. The Company should confirm and ensure the qualified independent drainage Consultant is a term that represents enough qualified persons to perform the work as envisioned and in a timely manner.

## 4.4 Construction Monitor

### Proposed text (LOU pg N/A)

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#### INDEPENDENT CONSTRUCTION MONITOR

An independent construction monitor shall be appointed by CAEPLA-PLC, 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. 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 inspection access (subject to safety requirements) to all construction activities.

## Opinion

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### Proposed measures:

- The Company's proposed LOU is silent on the need for and role of an independent Construction Monitor.
- CAEPLA-PLC proposes the addition of a section to the LOU (after section 23) that requires the appointment and outlines the role of an independent Construction Monitor. Similar roles were included in the Strathroy Lobo, Hamilton Milton and Lake Huron Pipeline Projects.
- The CAEPLA-PLC proposal is reasonable in my opinion; however, my additional comments follow.
- The Construction Monitor role represents a very good way for all parties to ensure the understandings reached between the Company and each landowner are translated into worker awareness and action during construction of the pipeline. These understandings begin as written agreements e.g., the LOU and the tile drainage plan, and for some situations, modifications are orally proposed in the field

<sup>2</sup> Panhandle Reinforcement Project: Environmental Report FINAL REPORT section 3.3.6 Agricultural Tile Drains, Stantec Consulting Ltd., File No. 160961079 June 2, 2016; Filed: 2016-06-10 EB-2016-0186 Exhibit A Tab 10 Schedule 1 Page 38 of 351

because plans do not always match up with actual field circumstances. The Construction Monitor role represents the on-site check and balance. The Construction Monitor watches for and documents that understandings are met and that the outcomes of modifications fall within the range of acceptability.

- The proposed text by CAEPLA-PLC should reference a Construction Monitor Statement of Work that indicates the scope, duties, authority, reporting expectations, etc. associated with the role. Two examples are available, one from the NPS 48 Strathroy Lobo Pipeline Project, Union Gas Limited, and the other from the Lake Huron Water Supply System Project (LHPLA & LHPWSS, 2012). Also, reference should be made to the FINAL REPORT Construction Monitor Services NPS 48 Strathroy Lobo Pipeline Project, Union Gas Limited (Cordner Science, 2008), which includes a number of recommendations related to the Construction Monitor role and Union's response (Union Gas Limited, 2009) to that report, plus other similar 'end-of-project' reports if available. The development of a draft Construction Monitor Statement of Work, however, is beyond the scope of this report.
- For greater clarity, the Construction Monitor role fulfils an essential function during pipeline construction across agricultural lands. All stakeholders including the Company, landowners, contractors and suppliers tend to be more aware of what they are doing when they know an independent monitor, whose main task is to determine whether understandings between the Company and landowners are being met, could appear at any time. Furthermore, the Construction Monitor can help everyone avoid big issues by bringing small problems to the attention of workers, and they can help the Company and landowners communicate more effectively by being present during discussions and offering independent expertise on a range of agricultural and land management questions.

## 4.5 Joint Committee

### **Proposed text (LOU pg N/A)**

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#### SCHEDULE

#### 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 PLC landowners and three representatives of the Company.

In addition to Wet Soils Shutdown issues, the Joint Committee's purpose is, with respect to PLC member properties, 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) 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 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. CAEPLA-PLC 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.

#### Payment to Landowner members

- i) The Company will pay to the landowner members of the Joint Committee at his or her direction a total payment of \$ 15,000 plus G.S.T. as an honorarium for their participation on the committee.

### **Opinion**

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#### Proposed measures:

- The Company's proposed LOU is silent on the need for and role of a Joint Committee.
- CAEPLA-PLC proposes the addition of a Schedule to the LOU (after section 30) that outlines the Landowner Relations and Terms of Reference (line 2) of a Joint Committee. The Joint Committee is also proposed by reference in sections 2, 15, 16 and in Schedule 5, the latter of which was addressed earlier in this report.
- The CAEPLA-PLC proposal is reasonable in my opinion; however, my additional comments follow.
- A similar committee was included in the Strathroy Lobo and Lake Huron Pipeline Projects.
- The Joint Committee role represents a very good way for all parties to ensure communications are ongoing and there is a mechanism in place for resolving issues.
- The proposed text by CAEPLA-PLC should be revised to provide more detail and especially in light of the recommendations in the FINAL REPORT Construction Monitor Services NPS 48 Strathroy Lobo Pipeline Project, Union Gas Limited (Cordner Science, 2008) and Union's response (Union Gas Limited, 2009). Documents describing the role of the Joint Committee from other similar projects may also inform this task, for example, the Lake Huron Water Supply System Project LOU (LHPLA & LHPWSS, 2012) and related project reports if available. The development of a draft Joint Committee Terms of Reference, however, is beyond the scope of this report.

## 5 LIST OF REFERENCES

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- Cordner Science. (2008, Dec 18). FINAL REPORT Construction Monitor Services NPS 48 Strathroy Lobo Pipeline Project Union Gas Limited. 55pp.
- LHPLA & LHPWSS. (2012). LOU Lake Huron Water Supply System Project FINAL VERSION. 52pp. LAKE HURON PIPELINE LANDOWNERS ASSOCIATION ("LHPLA") & LAKE HURON PRIMARY WATER SUPPLY SYSTEM ("LHPWSS").
- Stantec. (2016, Jun 2). Panhandle Reinforcement Project: Environmental Report FINAL REPORT Exhibit A, Tab 10, selected pages. (*File No. 160961079*), 25pp.
- Union Gas Limited. (2009, May 11). Union's Response to Recommendation by Cordner Science Final Report Construction Monitoring NPS 48 Strathroy Lobo Project. *Transmittal letter and response to OEB*, 6pp. Retrieved Jan 20, 2015, from <http://www.rds.ontarioenergyboard.ca/>
- Union Gas Limited. (2016, Revised May 11). LETTER OF UNDERSTANDING ("LOU") Panhandle Reinforcement-Dawn to Dover Station. 18pp.
- Union Gas Limited. (2016a, Filed Jun 10). PANHANDLE REINFORCEMENT PIPELINE PROJECT, Application to OEB, Exhibit A selected pages & maps. 34pp&5pp.
- Union Gas Limited. (2016b, Filed Jun 10). Panhandle Reinforcement Project Information Session. *EB-2016-0186 Exhibit A Tab 10*, 11pp.

## 6 APPENDICES

### 6.1 Appendix A: Curriculum Vitae

JANE SADLER RICHARDS, BSc(Agr) MSc PhD PAg  
OWNER / PRINCIPAL SCIENTIST

34050 Maguire Road, Allisa Craig, ON N0M 1A0  
Tel: 519 293 1190 Email: [janer@cordnerscience.com](mailto:janer@cordnerscience.com)



#### EDUCATION

Degree	University	Year
PhD Plant Sciences (Environmental Science)	Western University	2000
MSc Crop Science	University of Guelph	1985
BSc(Agr) Crop Science	University of Guelph	1980

Continuing Education since 2000	Provided by	Year
Paralegal, Graduate Certificate	Fanshawe College	2015 / 16
French Immersion, Level 2	Laval University	2014
Boardroom Financial Essentials	Institute of Corporate Directors	2014
ISO 50001:2011 Energy Management Systems	LANXESS AG corporate training	2013
Measuring Your Organization's Carbon Footprint: ISO 14064-1 Essentials - GHG Inventories	Canadian Standards Association	2011
WHMIS Certificate	Samia-Lambton Industrial Educational Co-op	2011
Sustainability Issues and Practices	Conferences / Self-directed learning e.g. Globe, Corporate EcoForum, CIAC, IPCC, WRI	2010-ongoing
Adjudicator and Tribunal Training	Agriculture, Food and Rural Affairs Appeal Tribunal (AFRAAT); Normal Farm Practices Protection Board (NFPPB); and Society of Ontario Adjudicators and Regulators (SOAR)	2004-ongoing
Study Director/Principal Investigator Training, Good Laboratory Practice (GLP - TQM)	West Coast Quality Training Institute and/or Independent Quality Assurance Consulting Inc.	2001-ongoing
Rural Municipal Drainage Course	Ontario Ministry of Agriculture, Food and Rural Affairs	2010
Compliance Education, Confined Field Trials of Regulated Genetically Engineered Crops	Biotechnology Industry Organization (USA) CropLife Canada (CAN)	2007 2006
National Pollutant Release Inventory	Environment Canada	2005
Public Meeting Training	Safety-Kleen Ltd. / Imperial Oil	2001 / 02
Advanced Principles of Toxicology	Center for Toxicology and Dept. Environmental Biology, Univ. of Guelph	2001
Media Training	MediaPrep / Jeff Ansell & Associates Inc.	2000 / 01

#### PROFESSIONAL DESIGNATION

Professional Agrologist (PAg)	Ontario Institute of Agrologists	1986-present
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**JANE SADLER RICHARDS, BSc(Agr) MSc PhD PAg**  
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## EMPLOYMENT

Position	Employer	Year
Member (Appointed)	Normal Farm Practices Protection Board (NFPPB), Government of Ontario	2015-present
Principal Scientist, Consultant and Sole Proprietor	Cordner Science <i>Agricultural and Environmental Consultants</i>	2000-present
Partner	Cordner Farms	1988-present 1982-1986
Member (Appointed)	Agriculture, Food and Rural Affairs Appeal Tribunal (AFRAAT), Government of Ontario	2004-2016
Managing Director	Network for Business Sustainability (NBS) Richard Ivey Business School Western University	2015
Global Specialist - Sustainable Development As an external service provider	LANXESS Butyl Rubber Business Unit	2011-2013
Director, Scientific Affairs and Senior Research Fellow	George Morris Centre <i>Canada's Independent Agri-Products Think Tank</i>	2000-2001
Pesticide Registration Officer	United Agri Products	1999-2000
Teaching Assistant	Western University	1995, 1998
Director, R&D Division; Senior Agrologist; Agronomist	Ecologistics Limited <i>Consultants in Environmental Management</i>	1986-1998
Senior Soil Conservation Advisor	Ontario Ministry of Agriculture and Food	1984-1986
Teaching Assistant	University of Guelph	1983
Agronomist	Upper Thames River Conservation Authority (UTRCA), Thames River Implementation Committee (TRIC) Program	1980-1983

## SELECTED ROLES AND PROJECT EXPERIENCE

### Scientist / Consultant / Advisor

#### **Project Manager and Pipeline Construction Monitor Services**

##### **48" Strathroy Lobo Pipeline Project**

Cordner Science provided a 3-person, third party, Monitoring Team for this project. During construction of the pipeline, the on-site Monitor observed and reported on construction activities of interest to landowners and the Ontario Energy Board (OEB). Observation included 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 reviewed construction activities for compliance with the OEB Conditions of Approval, Letters of Understanding (LOU) agreed to between landowners and the pipeline company, and all specific construction commitments included in the pipeline company's construction contract. Upon request from



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the landowner or the Construction Monitor Committee (CMC), which consisted of one representative of the OEB, the pipeline company and the landowners, the Monitor was involved in discussions related to on-site issues. For example, the Monitor Team played a key role during negotiations around the acceptability of replacement topsoil brought on-site. The Monitor Team provided independent daily and weekly reports to the CMC and others. Violations of conditions, landowner agreements or specifications were reported promptly.

The final report reviewed operations and made recommendations for consideration by the CMC. The final report included: a summary of activities and findings developed from the daily and weekly reports, including a photographic log; recommendations related to communications with landowners and the CMC, potential construction activity improvements and reporting requirements; and appendices containing, for example, copies of revised reporting forms, communications plan, and reporting protocol.

**Agricultural Advisor**

**The PRISM Pipeline Project, Route Selection**

As a sub-consultant on the Stantec team, my role during the route and site selection phase for a proposed pipeline extension in southern Ontario was to evaluate the agricultural potential of rural lands, identify potentially significant impacts (environmental / economic / social), and provide relevant advice to the client and to property owners. Issues related to aboriginal affairs (i.e. a potential route affecting the Six Nations of the Grand River) were discussed internally. The route and site selection study findings were presented at public meetings and a closed meeting with agricultural stakeholders.

**Project Director**

**Pipeline ROW Crop Yield Comparison**

My team developed and implemented a study of crop yield on and off a pipeline right-of-way across several agricultural fields in southwestern Ontario. This project was designed to evaluate the long term impacts of practices used during pipeline construction on agricultural crop yields. The findings were based on a statistical analysis of data obtained from a crop yield monitor mounted on a combine and were presented during a stakeholder meeting.

**Agricultural / Environmental Scientist**

**N Budgets, Leachable N, BMPs and Cost-Benefit Analysis  
 For The Protection Of Source Water, Waterloo, Ontario**

Based on knowledge and experience with farming, nitrogen management practices, and how nitrogen cycles through the environment, I provided key advice and input to the development of approximately 4300 annual nitrogen budgets spanning a 30 year timeframe. The outcome provided estimates of potentially leachable nitrogen within a key groundwater capture zone used to provide raw drinking water to over 400,000 people within the Regional Municipality of Waterloo (RMOW), Ontario. NMAN software was used to assess crop nutrient uptake. Data gaps were filled by extrapolation using science-based procedures. My work provided key input data used in a simulation model developed by Stantec for RMOW and a cost-benefit analysis developed by the George Morris Centre.

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**Agricultural / Environmental Scientist**

**Agricultural Survey, N Budgets, Leachable N, BMPs and Cost-Benefit Analysis  
For Protection Of Source Water, Strathroy, Ontario**

On this project, my role was to identify and indicate the relative effectiveness of agricultural best management practices (BMPs) that could have been used to control groundwater pollution due to leachable nitrogen within a rural wellhead capture zone. I completed a literature review relevant to the work. I also developed a detailed electronic survey of all potential rural / agricultural practices that could impact on nitrogen leaching to groundwater sources of drinking water in the Bosquart Well Field near Strathroy, Ontario. I compiled the results of the survey and used them along with values from the scientific literature to develop nitrogen budgets for each farm field and septic system in the capture zone. The N budgets were used to further develop a database of potentially leachable nitrogen during a 10 year timeline within the capture zone, which was then used to model nitrogen transport from source to wellhead. This project examined the known costs of a pollution incident plus the costs of implementing versus not implementing the BMPs.

**Lead Investigator, Advisor and Facilitator**

**Development of a Strategic Plan for the Class Authorization and Drain  
Classification Process, Fisheries and Oceans Canada**

I was asked to develop a plan for the effective delivery of the Class Authorization and Drain Classification Process for agricultural municipal drains in Ontario. I conducted several stakeholder interviews and prepared a detailed, web-accessible questionnaire.

**Senior Soil Conservation Advisor and Agronomist**

**Ontario Ministry of Agriculture and Food and Upper Thames River Conservation Authority**

As an extension specialist, I worked directly with farmers, farm organizations and the farm community in Ontario to promote best management practices related to soil and water conservation and improved farm management.

**Agricultural Advisor**

**Benefit-Cost Analysis of BMPs for Agricultural Nutrient Management**

My role on the project team was to provide advice on nutrient management practices in agriculture across Canada to ensure that the literature review, national survey and subsequent economic evaluations represented actual and potential Canadian practices. Considerable time was spent with Ipsos-Reid during the development and testing of the telephone survey instrument to ensure it met study objectives, was easily understood by respondents and provided backup statements for survey administrators when clarification was required.

**Study Director, Biomonitoring / Team Lead Agriculture, Environmental Assessment (EA)**

I was repeatedly engaged by Clean Harbors (and their predecessor companies Tricil, Laidlaw and Safety Kleen) from 1991-1997 and from 2000-2011, to design and implement important environmental programs and studies associated with specific and controversial operations at their hazardous / waste management facilities - mainly in near Sarnia, but also in an emergency related to an explosion that occurred in London, Ontario. My work was endorsed by local residents, public comments were neutral to positive, and regulatory compliance of the work was confirmed.

Of particular note, I designed and implemented the Biomonitoring Program in 1991 to track the concentrations of more than 60 organic and inorganic chemicals in environmental media (soil, sediment,

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crops and natural vegetation) near a hazardous waste management facility at Sarnia, Ontario. The Program continues today with few adjustments to the study protocol. Through the years, I developed, managed and statistically analyzed a large database of scientific information. Today, the database represents a key element in the environmental assessment (EA) related to the continuation of the facility. During my time on the Program, 14 farm sites were involved. Sensitivity to public concerns was imperative in this work. The Program scope and timeline are rare on a global scale.

**Project Director**

**A Comparison of the Environmental Effects of Conservation and Conventional Crop Production Systems**

The purpose of this research was to determine the environmental impacts of conservation (i.e., BMPs) and conventional crop production systems on soil and water quality. Site selection was critical to the success of the work. A very detailed site selection process involving a telephone questionnaire and on-site farm visits was used. Eight paired, in-field watersheds (16 cooperators) were selected in southern Ontario. Several chemical, physical and biological indicators of soil and water quality were compared between the paired watersheds within active farm fields.

**Principal Field Investigator and/or Project Manager**

**Pesticide Efficacy, Crop Tolerance, Crop Residue, Aquatic Dissipation, Soil Dissipation, Human Exposure Trials for Product Registration**

Over 30 Good Laboratory Practices (GLP) and non GLP compliant field studies were conducted on a range of pesticide products. Trials were located in farm fields and success depended on positive relationships with cooperating farmers.

**Director, Agronomic Program**

**Pilot Watershed Sub-program, Soil and Water Environmental Enhancement Program**

This study compared the effects of adoption, versus non-adoption, of conservation farming practices, including best management practices (BMPs), on agricultural and environmental parameters. A key aspect of the work included the identification of conservation farming technologies that were appropriate for use in Ontario and the needs of individual farm operations. Site selection was critical to the success of the work. A very detailed site selection process involving community meetings, completion of a telephone questionnaire and on site farm visits was used. Six watersheds in southwestern Ontario, including over 75 farm cooperators, were involved in the study.

The success of this multi-million dollar project depended on my team's ability to implement a strategy requiring half of the landowners within selected pairs of watersheds to adopt new soil and water conservation practices on their farms (treatment), while requiring the other half of the landowners to maintain the status quo (control). Our actual success rate was greater than 80% adoption, which was considered an excellent achievement. This project was a major research effort under the Soil and Water Environmental Enhancement Program (SWEET). Many government, university, and consulting scientists were involved and a full range of indicators of economic, environmental and social sustainability were evaluated.

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## **Adjudicator**

### **Normal Farm Practices Protection Board (NFPPB), Government of Ontario**

I was recently appointed as a member of this tribunal, which hears applications on issues related to impacts from and on farm practice in Ontario.

### **Agriculture, Food and Rural Affairs Appeal Tribunal (AFRAAT), Government of Ontario**

I regularly drafted appeal decisions and co-authored more than 100 decisions related to, for example, organizational compliance, regulated commodities, environmental (water) concerns, property tax class, and one on aboriginal affairs. Decisions required an objective and careful balance of conflicting or contradictory considerations. I acted as the panel Chair for specific Tribunal appeal proceedings when requested by the Tribunal Chair. My appointment was extended for a fourth term - beyond the normal 10 year maximum. I was invited by the Tribunal Chair to join him and one other in discussion with the Deputy Minister about Tribunal issues.

## **Senior Manager**

### **Owner and Principal Scientist, Cordner Science**

I have developed a sole proprietorship consultancy specializing in agricultural and environmental issues. The business has met or exceeded its objectives and the work involves industry, business, government, academics, and landowners on a wide range of projects.

### **Managing Director, Network for Business Sustainability, Richard Ivey Business School, Western University**

In this role I was responsible for operational excellence in delivering a knowledge sharing and collaboration service to businesses as they address sustainability challenges on a local, regional, national and global scale.

### **Director, R&D Division and Member, Board of Directors, Ecologistics Limited**

I Initiated and developed the R&D Division for this environmental and resource management consulting firm. My division lead the company in generated revenue and profitability within 10 years of start-up.

## **Sustainability**

### **Global Specialist – Sustainable Development, LANXESS Butyl Rubber Business Unit**

Key accomplishments included completion of the 2010 (audited) and 2011 Greenhouse Gas (GHG) Reports for global operations within a dynamic work environment, and development and initiation of a sustainability action plan and communications program for the Business Unit.

### **Member, Leadership Council, Network for Business Sustainability**

One of 15 senior business leaders who contributed to the report, *Changing the System, The 10 Sustainability Challenges for Canadian Business in 2013*, NBS.

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## **Writer**

### **Principal Investigator and Writer**

#### **A Review of the Enclosure of Watercourses in Agricultural Landscapes and River Headwater Functions AND A Review of the Economic Importance of Drainage to Agricultural Production In Ontario**

Fisheries and Oceans Canada, and Huron County Farm Environmental Coalition / Ausable Bayfield Conservation Authority / Huron County Federation of Agriculture

Two complementary literature reviews were commissioned to examine the agricultural and environmental impacts of enclosing open drains in agricultural catchments.

### **Writer in the Agricultural Popular Press**

A minimum of 20 articles were published in the popular press including Ontario Farmer (provincial), Country Guide (national) and Corn in Canada (national).

## **Speaker/Lecturer**

### **Webinar Presentation, *The Business Case for Sustainability - Opportunities and Options***

Chemical Industry Association of Canada

The presentation content was described as 'valuable, fresh and accessible'.

### **Guest Speaker, *Nitrogen, Groundwater and Estimating the Effect of BMPs***

7th Certified Crop Advisors (CCA) Conference And Annual Meeting

I presented the findings from our nitrogen in groundwater study near Strathroy, Ontario

### **Guest Speaker, *The Enclosure of Agricultural Drains, Emerging Issue or Passing Curiosity?***

Ontario Drainage Engineer's Conference, Guelph, Ontario

I presented information on the extent and impacts of drain enclosure in a selected area near London, Ontario.

### **Keynote Speaker, *A New Era for EDSS? Water Ignites a Fear of Farming***

Fourth International Symposium on Environmental Software Systems, Banff, 2001

I was asked to set the tone for the conference and build enthusiasm for the remaining program. The conference organizer indicated the presentation exceeded his expectations.

### **Commentator**

AgVision television program, Kevin Stewart, Producer, London, Ontario

Two short commentaries on nutrient management plans and pesticides were aired on provincial television.

## **HONOURS AND AWARDS:**

### **Alumni Medal of Achievement**

A prestigious university award – recognized for demonstrating significant professional leadership and outstanding contributions to soil and water conservation

University of Guelph

**JANE SADLER RICHARDS, BSc(Agr) MSc PhD PAg**  
**OWNER / PRINCIPAL SCIENTIST**

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**Agrologist in Residence**

A provincial and university honour expressed through an invitation to live in residence at the university during one week in the fall term. While there, I conducted a vigorous program discussing professionalism, ethical challenges and issues related to agricultural and environmental consulting.  
 University of Guelph and the Ontario Institute of Agrologists

**Conservationist of the Year Award (shared)**

Recognized, together with my spouse, for implementing significant agricultural, environmental, and natural habitat conservation measures on our farm.  
 Ausable Bayfield Conservation Authority

**Environmental and Agricultural Advisor to Ukraine**

Successful applicants were chosen to represent Canada in Ukraine and to provide an exchange of ideas with Ukrainians as they emerged from the former Soviet Union.  
 Government of Canada and Canadian Federation of Agriculture

**Professional Agrologist Pin**

A provincial award given in appreciation of contributions made to OIA activities  
 Ontario Institute of Agrologists

**Booster Award**

Awarded for enthusiastic support of the agricultural industry in Huron County  
 Huron Soil and Crop Improvement Association

**Additional**

6 graduate / undergraduate awards  
 University of Guelph (5) and Canadian Expert Committee on Weeds (1)

**POSITIONS HELD:**

Co-coordinator, Western Branch (Volunteered)  
 Ontario Institute of Agrologists, 2011-2014, 2016-present

Chair and Member, Board of Examiners (Invited)  
 Ontario Institute of Agrologists, 2004 and 2000-2004

Judge, Canada-Wide Science Fair 2000 (Gr. 9-13) (Invited)  
 Agricultural Institute of Canada, 2000

Treasurer and Member, Board of Directors (Invited)  
 Ecologistics Limited, 1994-1997

Secretary/Treasurer (Acclaimed)  
 Expert Committee on Weeds, Eastern Section, 1996

Founding organizer (First to initiate discussions)  
 Ontario Chapter, International Society of Quality Assurance, 1995

Co-Chair, Information and Education Committee (Volunteered)  
 Ontario Chapter, Soil and Water Conservation Society, 1983-1986



## 6.2 Appendix B: OEB Form A Acknowledgment Of Expert's Duty

### APPENDIX "B"

EB-2016-0186

#### 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** the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Schedule B, and in particular, S.36 thereof;

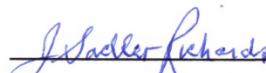
**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders granting leave to construct natural gas pipelines and ancillary facilities in the Township of Dawn Euphemia, Township of St. Clair and the Municipality of Chatham-Kent;

**AND IN THE MATTER OF** an Application by Union Gas Limited for an Order or Orders for approval of recovery of the cost consequences of all facilities associated with the development of the proposed Panhandle Reinforcement Pipeline Project.

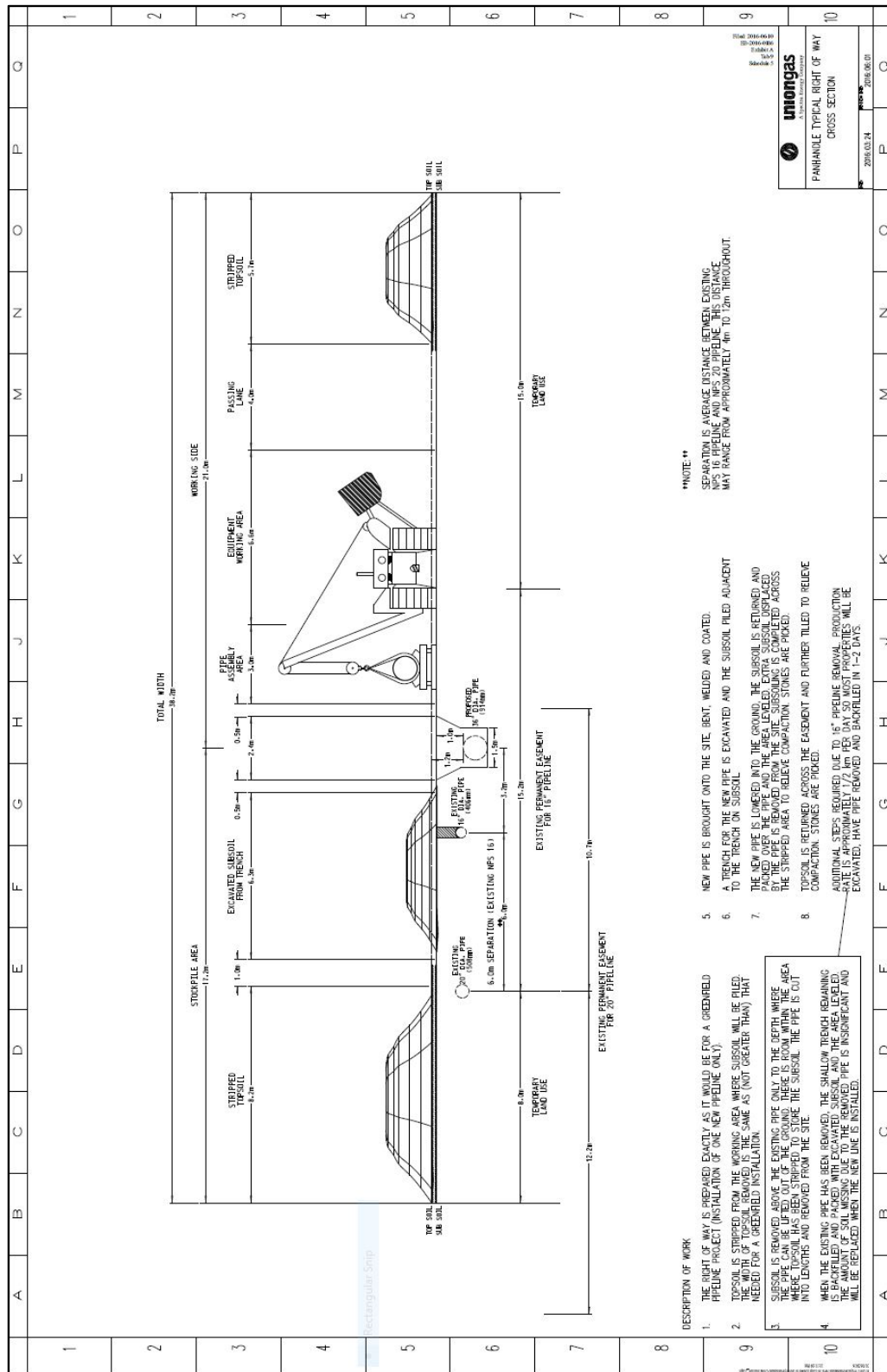
### ACKNOWLEDGEMENT OF EXPERT'S DUTY

1. My name is Jane Sadler Richards. I live at Ailsa Craig, in the Province of Ontario.
2. I have been engaged by or on behalf of CAEPLA-PLC to provide evidence in relation to the above-noted proceeding before the Ontario Energy Board.
3. I acknowledge that it is my duty to provide evidence in relation to this proceeding as follows:
  - a. to provide opinion evidence that is fair, objective and non-partisan;
  - b. to provide opinion evidence that is related only to matter that are within my area of expertise; and
  - c. to provide such additional assistance as the Board may reasonably require, to determine a matter in issue.
4. I acknowledge that the duty referred to above prevails over any obligation which I may owe to any party by whom or on whose behalf I am engaged.

DATE: October 21, 2016

  
 Dr. Jane Sadler Richards

## 6.3 Appendix C: Panhandle Typical Right of Way Cross Section





LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p><b>8. TESTING FOR SOY BEAN CYST NEMATODE</b></p> <p>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, <b>the Joint Committee</b> 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><b>2. Testing For Soybean Cyst Nematode</b></p> <p>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><b>2. Testing For Soybean Cyst Nematode</b></p> <p>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><b>2. Testing For Soybean Cyst Nematode</b></p> <p>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, <b>in consultation with the Joint Committee</b>, 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>
<b>V.16(e) – Staking of Work Space</b>	<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.</p> <p><b>Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation.</b></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 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><b>The Company will restake the easement limit for post construction tile work at the request of the landowner.</b></p>	<p><b>3. Staking of Work Space</b></p> <p>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 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><b>5. Staking of Work Space</b></p> <p>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 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><b>5. Staking of Work Space</b></p> <p>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><b>Where topsoil is to be stored off easement, the stakes will not be removed during the stripping operation.</b></p> <p>The stakes will be located at 30 metre (98.4 foot) intervals prior to construction <b>and will be spray painted or otherwise marked in bright orange.</b> 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.</p> <p><b>The Company will restake the easement limit for post construction tile work at the request of the landowner.</b></p>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
<p>III.10(a) – Topsoil Stripping</p> <p>III.10(b) – Existing Crown from Original Construction</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 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><u>4. Topsoil Stripping</u></p> <p>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. <u>Topsoil Stripping</u></p> <p>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. <u>Topsoil Stripping</u></p> <p>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 <b>with one metre separation</b> 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><b>Topsoil stripping will be conducted using an excavator and not a bulldozer.</b></p> <p><b>Topsoil previously disturbed by pipeline construction will be stripped and piled separately from virgin topsoil, with one metre separation between piles.</b></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><b>At the request of a landowner a mulch layer will be provided between the existing topsoil and the stripped topsoil piles in situations where a crop is not present.</b></p>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<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>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 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>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>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><b>V.16(a) – Depth of Cover</b> LHPWSS will install the 2011 Twinning pipeline with at least 1.8 metres of cover.</p> <p>If LHPWSS, acting reasonably, determines in consultation with the landowner that it is necessary to increase the depth of the 2011 Twinning pipeline to accommodate facilities such as drainage, processes such as deep tillage, heavy farm equipment or land use changes, LHPWSS will provide for additional depth of cover.</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 <b>drainage expert</b> that it is necessary to increase the depth of the Pipeline to accommodate facilities such as <b>drainage</b>, processes such as deep tillage, heavy farm equipment or land use changes, Union will provide for additional depth of cover.</p>	<p><b><u>7. Depth of Cover</u></b> 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><b><u>7. Depth of Cover</u></b> 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><b><u>7. Depth of Cover</u></b> The Company will install the pipeline with a minimum of <b>1.5 metres of cover</b>, except where bedrock is encountered at a depth less than <b>1.5 metres</b>, 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 <b>facilities such as drainage and/or</b> processes such as deep tillage, heavy farm equipment or land use changes, the Company will provide for additional depth of cover</p>
<p><b>III.10(c)</b> Topsoil Restoration</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</p>	<p><b><u>9. Topsoil Replacement, Compaction Removal and Stone Picking</u></b></p> <p>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><b><u>9. Topsoil Replacement, Compaction Removal and Stone Picking</u></b></p> <p>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><b><u>9. Topsoil Replacement, Compaction Removal and Stone Picking</u></b></p> <p>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>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p>a mechanical stonepicker. The subsoil on the easement will be tilled again as above.</p> <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>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 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 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 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 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 50 mm (2 inches) in diameter. After topsoil replacement, the topsoil will be tilled 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, 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 3.</p>



LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p><b>6.5 STONEPICKING</b></p> <p>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.</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>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>For this Project, the Company shall, at a time satisfactory to the Landowner, return to pick stones greater than 2 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><b>VIII – Drainage / Tile Drains</b></p>	<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</p>	<p><b>10. Drainage Tiling</b></p> <p>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><b>10. Drainage Tiling</b></p> <p>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</p>	<p><b>DRAINAGE TILING</b></p>

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	C AEPLA-PLC
	<p>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 company will install tile along the pipeline in the following situations:</p> <p>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.</p> <p>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.</p> <p>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</p>	<p>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.</p>	<p>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 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 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>	

LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p>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 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</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 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</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 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</p>	

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LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p>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 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>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>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</p>	<p>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>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</p>	



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		<p>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>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</p>	<p>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>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</p>	

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	<p>The company will provide the landowner with a copy of as-built drainage plans.</p>	<p>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>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>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><b>14. Tree Replacement</b></p> <p>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>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</p>	<p><b>14. Tree Replacement</b></p> <p>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>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><b>14. Tree Replacement</b></p> <p>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>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>

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		<p>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>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>The Company will warrant such trees for a period of <b>three years</b> following planting, provided the Landowner waters the trees as appropriate after planting.</p>
<p><b>V.16(c) – Equipment Travel</b></p> <p><b>V.16(b) – Trench opening</b></p> <p><b>V.16(m) Replacement of Fences</b></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.(f) The Company will not open more than 6.0 km. of trench line at a time.</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 <b>destroyed</b> during pipeline construction.</p>	<p><b>15. <u>Covenants</u></b></p> <p>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</p>	<p><b>15. <u>Covenants</u></b></p> <p>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</p>	<p><b>15. <u>Covenants</u></b></p> <p>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><b>ADD: The Company will not open more than 6.0 km. of trench line at a time.</b></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</p>

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<b>V.16(j) – Culverts</b>	<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>construction will be reset.</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>construction will be reset.</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>construction will be reset.</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>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>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>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>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>
<b>V.16(k) Monitoring of Private Driveways</b>	<p>The Company agrees to monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>	<p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>	<p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>	<p>ix) To monitor and maintain private driveways that cross the easement for a period of 18 months after construction.</p>
<b>V.16(l) No off-easement activities without permission</b>	<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>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>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>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>ADD: The Company will secure the work site on each property as necessary to prevent unauthorized access to the work site and/or to maintain safety. At the request of the Landowner, the Company will fence off the work site.</p>
<b>II.9(d) – Landowner Complaint Tracking System</b>	<p>1.(x) The Company’s Landowner Complaint Tracking system shall be available to landowners for the proposed construction.</p>	<p>xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for</p>	<p>xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the</p>	<p>xi) To implement its Landowner Complaint Tracking system which will be available to Landowners for the proposed</p>

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<b>I.4 – Agreement provided to Contractors</b>	1.(cc) The Company will provide a copy of this Letter of Understanding and the environmental reports to the construction contractor.	the proposed construction.  xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.	proposed construction.  xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.	construction.  xii) To provide a copy of this Letter of Understanding and all environmental reports to the construction contractor.
<b>V.16(d) – Suitable passage for agricultural equipment during construction</b>	1.(ee) The Company will ensure suitable passage and land access for agricultural equipment during construction.	  xiii) To ensure suitable passage and land access for agricultural equipment during construction.	  xiii) To ensure suitable passage and land access for agricultural equipment during construction.	  xiii) To ensure suitable passage and land access for agricultural equipment during construction.
<b>III.10(e) – Topsoil Replacement</b>	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 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	  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.	  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.	  xiv) 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

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IX – Post Construction Soil Testing	develop a prescription to rectify the problem. This may include the importation of topsoil.			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.
		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.	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.	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.
	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.	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.	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.	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.
	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	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	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	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



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VI.19 – Depth of Cover survey	concerns are experienced with weeds.	the event that concerns are experienced with weeds.	are experienced with weeds.	experienced with weeds.
	<p><b>6.2 DAMAGES FROM PIPELINE OPERATIONS</b></p> <p>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.</p> <p>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>xviii) To implement the Company's Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.</p>	<p>xviii) To implement the Company's Integrity Dig Agreement for all integrity and maintenance operations on the pipeline.</p>	<p>xviii) To implement the Union Gas Limited - GAPLO Integrity Dig Agreement for all integrity and maintenance operations including pipe investigation, repair and replacement, drainage remediation work and depth of cover remediation work.</p>
	<p><b>6.4 DEPTH OF COVER</b></p> <p>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>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>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 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>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 1.2 metres the Company shall restore depth of cover to a minimum of 1.2 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 0.9 metres of cover over the pipeline.</p>
	<p>1.(bb) Any imported topsoil shall be natural, cultivated, medium loam, neither clay or</p>	<p>xx) Any imported topsoil shall be natural, free of SCN and shall have</p>	<p>xx) Any imported topsoil shall be natural, free of SCN and shall have</p>	<p>xx) Any imported topsoil shall be natural, free of SCN and shall have</p>

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<p><b>II.9(b)(ii)</b> In addition to the contact available by landowner to the LHPWSS’s project manager or designated agent, there shall be established a “Pipeline Impact Consultation Committee” (hereinafter referred to as the “Joint Committee”) consisting of LHPLA and LHPWSS representative(s) as agreed from time to time between the parties to provide a forum for communication and liaison between LHPWSS and LHPLA members with respect to any issues which may arise before, during and following construction. The Joint Committee shall hold regular meetings, at least monthly, or more frequently as they may determine.</p>	<p>sandy in nature, capable of heavy agricultural growths and be from a source approved by the landowner.</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>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>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p>	<p>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>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p>	<p>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>xxi) To implement Union’s wet soil shut down practice as described in Schedule 4.</p> <p>ADD: The Company agrees to implement one joint committee for the project under the terms of reference agreed to in Schedule _____ 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><b>Landowner covenants as follows:</b></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><b>Landowner covenants as follows:</b></p> <p>i) To execute a Release Agreement 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><b>Landowner covenants as follows:</b></p> <p>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.</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.</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.9(b)(v) – Dispute Resolution – Expert Consultants</p> <p>II.9(c)(ii) – Dispute Resolution</p> <p>Schedule “F” – Dispute Resolution Process</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>16. Dispute Resolution</p> <p>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</p>	<p>16. Dispute Resolution</p> <p>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</p> <p>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>

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	<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, 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>Productivity Loss under Article 21 hereof.</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>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>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. _____ and Schedule _____ hereof, the Company may retain a 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>
VII – Woodlot and Hedge Rows / Other Property Specific Matter	<p><b>5.2 (b) WOODLOTS AND HEDGEROW TREES</b></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</p>	<p><b><u>22. Woodlots and Windbreak/Hedgerow Trees</u></b></p> <p>With respect to compensation for damage to woodlots, the Landowner will have the following two options:</p> <p><b>Option 1:</b> 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><b><u>22. Woodlots and Windbreak/Hedgerow Trees</u></b></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><b><u>22. Woodlots and Windbreak/ Hedgerow Trees</u></b></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>

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	<p>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.</p> <p>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.</p> <p>Prior to the start of construction, the following options will be discussed with the landowner, and the most appropriate option selected:</p> <p>Option 1: The land will be completely cleared for construction with all stumps and brush removed so that the land can be cultivated.</p> <p>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>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</p>	<p><b>Option 2:</b></p> <p>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> <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>Option 2:</p> <p>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> <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>Option 2:</p> <p>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> <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>

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	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.			
XII.45(c) – Gored Lands	<p><b>7. GORED LAND</b></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><b>23. Gored Land</b></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><b>23. Gored Land</b></p> <p>The Company agrees to pay the Landowner 100 % crop loss on the gored land, where reasonably practical. Gored land is defined as land rendered inaccessible or unusable for agricultural purposes during the Project.</p>	<p><b>23. Gored Land</b></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>At the Landowner's request, the Company will plant a cover crop on gored land.</p>
<p>II.9(b)(i) – Independent Construction Monitor</p> <p>Schedule “C” – Construction Monitor Scope of Work</p>	<p><b>9. INDEPENDENT CONSTRUCTION MONITOR</b></p> <p>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 Union, the OEB and GAPLO. The scope of work for the construction monitor will be:</p> <p>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;</p> <p>2. To review construction activities for compliance with the OEB Conditions of</p>		<p><b>INDEPENDENT CONSTRUCTION MONITOR</b></p> <p>An independent construction monitor shall be appointed by CAEPLA-PLC, 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>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 inspection access (subject to safety requirements) to</p>

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		<p>Approval, Letters of Understanding (“LOU”) agreed to between landowners and Union;</p> <p>3. To review all specific construction commitments included in Union’s construction contract;</p> <p>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</p> <p>5. To prepare and deliver a series of activity reports in a timely manner to the appropriate persons.</p> <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>all construction activities.</p>
	<p><b>2      LIABILITY</b></p> <p>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><b>24.    Liability</b></p> <p>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.    <b>Liability</b></p> <p>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.    <b>Liability</b></p> <p>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 and save the Landowner harmless 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>30.    <b>Integrity Dig Agreement</b></p> <p>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>30.    <b>Integrity Dig Agreement</b></p> <p>The Union Gas Limited – GAPLO Integrity Dig Agreement will be utilized for all integrity and maintenance operations including pipe investigation, repair and replacement, drainage remediation work and depth of cover remediation work</p>

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				pertaining to this pipeline and the existing paralleling NPS20 pipeline from Dawn to Dover Station.
	<div><div>SCHEDULE 1</div><div>Landowner Relations and Terms of Reference of Joint Committee</div></div> <p>In addition to Wet Soils Shutdown issues, the Joint Committee's purpose is to:</p> <p>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;</p> <p>ii) provide a brief overview of issues/concerns raised during and following construction; and,</p> <p>iii) consider which items should be included in a Post Construction Report. The objective of the Joint Committee is to provide:</p> <p>i) a vehicle to address issues/concerns which arise during and following construction;</p> <p>ii) deal with any unforeseen circumstances which may arise during or following construction; and,</p> <p>iii) an opportunity for landowners to comment on how Union might improve future construction practices.</p> <p>In reviewing the foregoing, the types of issues which may be addressed are as follows:</p> <p>i) landowner concerns that arise during and following construction;</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 in the view of the landowners might be improved in</p>		<div><div>SCHEDULE _____</div><div>Landowner Relations and Terms of Reference of Joint Committee</div></div> <p>Committee Make-Up</p> <p>i) Members shall be affected landowners, and appropriate representatives of the Company. The Joint Committee shall be composed of two PLC landowners and three representatives of the Company.</p> <p>In addition to Wet Soils Shutdown issues, the Joint Committee's purpose is, with respect to PLC member properties, to:</p> <p>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;</p> <p>ii) provide a brief overview of issues/concerns raised during and following construction; and,</p> <p>iii) consider which items should be included in a Post Construction Report. The objective of the Joint Committee is to provide:</p> <p>i) provide a vehicle to address issues/concerns which arise during and following construction;</p> <p>ii) deal with any unforeseen circumstances which may arise during or following construction; and,</p> <p>iii) provide an opportunity for landowners to comment on how Union might improve future construction practices.</p> <p>In reviewing the foregoing, the types of issues which may be addressed are as</p>	

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	<p>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. 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.</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>follows:</p> <p>i) landowner concerns that arise during and following construction;</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 in the view of the landowners 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 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 the landowner members of the Joint Committee at his or her direction a total payment of \$ 15,000 plus G.S.T. as an honorarium for their participation on the committee.</p>
IV. Wet Soil Protocol	<p><b>SCHEDULE 5</b></p> <p><b>Wet Soils Shutdown</b></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</p>	<p><b>SCHEDULE 6</b></p> <p><b>Wet Soils Shutdown</b></p> <p><i>The following sets out the Wet Soils Shutdown practice of Union Gas Limited for pipeline construction, repair and maintenance on agricultural lands.</i></p>	<p><b>SCHEDULE 6</b></p> <p><b>Wet Soils Shutdown</b></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><b>SCHEDULE 5</b></p> <p><b>Wet Soils Shutdown</b></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</p>



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	<p>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>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</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. 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.</p> <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</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. 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.</p> <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</p>	<p>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 effect 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 effects on the soils.</p> <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</p>



LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
	<p>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 crop loss damage compensation on the area affected by the activities ( area also to be determined by the</p>	<p>thereby removing any potential incentive for the contractor to work in wet conditions.</p> <p>In addition, Union’s inspection staff is responsible for ensuring that construction activities do not occur during wet soils shutdown. 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LAKE HURON PIPELINE	STRATHROY LOBO	HAMILTON MILTON (OEB ORDER)	PANHANDLE	CAEPLA-PLC
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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  
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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-imbursement 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-imbursement 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 Cordner 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:

<b>OPERATIONS</b>					
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**

<b>Section 1: Pipeline Construction Procedures in Letter of Understanding (LOU)</b>	<b>CMT Concern</b>
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.

### 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.

(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.

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.

(s) The landowner will execute a

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 7<sup>th</sup> a grader established the topsoil depth and topsoil was stripped on July 9<sup>th</sup>. 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 24<sup>th</sup> pipe stringing occurred and a dozer was used to level out the ruts made by the pipe trucks in the soft subsoil. From July 26<sup>th</sup> to 30<sup>th</sup> the pipe bending, end preparation, welding and coating operations took place and on August 1<sup>st</sup> the property was used as a staging area for the bore hole under the CNR railway line.

On August 3<sup>rd</sup> 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 8<sup>th</sup> 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 15<sup>th</sup> backfilling of the trench and removal of the dewatering well points began from the CNR crossing to McEvoy Road. On August 20<sup>th</sup> a pump was used to help dry out the low lying areas of the property. On August 22<sup>nd</sup> the subsoil was graded and on August 28<sup>th</sup> and 29<sup>th</sup> the topsoil was pulled across the ROW. On September 7<sup>th</sup>, 8<sup>th</sup> and 13<sup>th</sup> the ROW was subsoiled to mitigate compaction from construction activities, and cultivation and clean-up of the ROW were performed on September 22<sup>nd</sup>.

On May 13<sup>th</sup> and 14<sup>th</sup>, 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 4<sup>th</sup> to August 16<sup>th</sup>)  
 Clean-up = 35 days (August 20<sup>th</sup> to September 22<sup>nd</sup>, 2007 and May 13<sup>th</sup> to 14<sup>th</sup>, 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 27<sup>th</sup> to August 3<sup>rd</sup> 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 4<sup>th</sup> and pipe trenching took place from August 10<sup>th</sup> to 13<sup>th</sup>. The pipe was laid in the trench on August 17<sup>th</sup> and backfilling occurred on August 18<sup>th</sup>. On August 27<sup>th</sup> preparations were made for the open cut crossing of the Henderson Drain and the crossing was completed on August 28<sup>th</sup>. The tie-ins to the 48" pipe on both sides of the drain were made on August 29<sup>th</sup> and on August 30<sup>th</sup> the dewatering well points were removed.

On September 1<sup>st</sup> 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 4<sup>th</sup> to 18<sup>th</sup> the subsoil was graded, topsoil was pulled and deep tillage completed. On September 25<sup>th</sup> the topsoil was deep tilled and grading occurred on October 4<sup>th</sup>. The flume in the Henderson drain was removed on October 9<sup>th</sup> and the fence on the property was repaired on October 30<sup>th</sup>. 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 11<sup>th</sup> to August 18<sup>th</sup>)

Open-cut crossing of Henderson Drain with tie-ins = 3 days (August 28<sup>th</sup> to 30<sup>th</sup>)

Clean-up (including fence installation) = 56 days (September 4<sup>th</sup> to October 30<sup>th</sup>)

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 20<sup>th</sup> followed by grading of the subsoil on July 27<sup>th</sup>.

On August 1<sup>st</sup> pipeline stringing took place. The pipe bending, end preparation, welding and coating occurred from August 10<sup>th</sup> to 14<sup>th</sup>. Trenching began on August 27<sup>th</sup> and the pipe was lowered into the trench on September 8<sup>th</sup>. From September 13<sup>th</sup> to 19<sup>th</sup> 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 5<sup>th</sup> to 17<sup>th</sup> the stones on the surface of the exposed subsoil were picked. On October 22<sup>nd</sup> 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 26<sup>th</sup> to 30<sup>th</sup> 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 20<sup>th</sup> to September 19<sup>th</sup>)

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"> <li>includes Appendix A: Conditions of Approval</li> </ul>	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"> <li>Schedule 1 – General Conditions</li> <li>Schedule 2 – Technical Specifications and Drawings</li> <li>Schedule 3 – Special Instructions</li> <li>Schedule 4 – Price Schedule</li> <li>Addenda</li> </ul>	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"> <li>Summarized the list of commitments to the landowner as listed in their Letter of Understanding (LOU)</li> <li>Summarized landowner answers/requests during pre construction interview</li> </ul>	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"> <li>Listed daily operations and location of work</li> </ul>	Union Gas from Banister Construction; available daily
7	Aerial photographs (Drawing K041-01 to 03) <ul style="list-style-type: none"> <li>Showed property boundaries, numbers and landowner names</li> </ul>	Union Gas
8	Map of access points to ROW <ul style="list-style-type: none"> <li>Kickoff to SF12</li> </ul>	Union Gas
9	Clean-up procedure package (draft 17Aug07) <ul style="list-style-type: none"> <li>Documented procedure re soils, special instructions, construction specifications and equipment allowances</li> </ul>	Union Gas
10	Pipeline Drawings (Drawing K172 series) <ul style="list-style-type: none"> <li>Construction alignment sheets and detail drawings</li> <li>Crossing drawings</li> </ul>	Union Gas; updated once
11	List of property owners and property descriptions	Union Gas
12	Contact List <ul style="list-style-type: none"> <li>Names and cell numbers of key persons</li> </ul>	Union Gas; updated as needed
13	Efile templates for various reports <ul style="list-style-type: none"> <li>Daily, Contacts, Wet Soil Shutdown, Weekly Reports</li> </ul>	Union Gas; revised by CMT
14	List of tackifying locations on ROW <ul style="list-style-type: none"> <li>Locations identified as needing hydro-mulching to hold blowing sand/soil to control blowing sand/soil</li> </ul>	Union Gas
15	Gantt chart of work timelines	Union Gas
16	Incident Notification and Review Guidelines <ul style="list-style-type: none"> <li>Re safety incidents</li> </ul>	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:

- 1.0 PURPOSE
- 2.0 SCOPE
- 3.0 GENERAL
- 4.0 RESPONSIBILITIES
- 5.0 PROCEDURE
  - 5.1 VERBAL COMMUNICATIONS
  - 5.2 WRITTEN COMMUNICATIONS
  - 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

<b>Date</b>	<b>Contractor Name</b>	Cordner Science
<b>Report No.</b>	<b>Monitor Name</b>	

<b>LOCATION</b>			
County	Middlesex	Township	Middlesex Centre
Conc		Lot	
From Station	Strathroy	To Station	Lobo

<b>Landowner #s &amp; Names</b>					
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

<b>Road/Rail/Water Crossings</b>	none
----------------------------------	------

<b>WEATHER</b> (Temperature/Rainfall/ Comment)		Today	
		Forecast	

<b>OPERATIONS</b>							
	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

<b>PHOTOGRAPHY</b>							
Photographs	Yes		No		Identifiers		
Camcorder	Yes		No		Identifiers		

**COMMENTS**

No. & Property	Pics	Notes

Other Comments – date

\_\_\_\_\_  
Monitor's Signature



## UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE CONSTRUCTION MONITOR WEEKLY REPORT

<b>Date</b>	<b>Contractor Name</b>	<b>Cordner Science</b>
<b>Report No.</b>	<b>Monitor Name</b>	

**WEEK OF**

Monday, (month, day, year)

to Sunday , (month, day, year)

<b>WEATHER</b>	<b>Date(d/m/y)</b>	<b>Temp. (°C)</b>	<b>Comment</b>
Mon			
Tue			
Wed			
Thu			
Fri			
Sat			

**CONDITIONS ON THE RIGHT-OF-WAY**

<b>Day(s)</b>	<b>Comments</b>
Mon	
Tue	
Wed	
Thu	
Fri	
Sat	

**CONSTRUCTION PROGRESS TO DATE****WET SOIL SHUTDOWN****ANTICIPATED CONSTRUCTION IN SENSITIVE AREAS****SUMMARY OF CONSTRUCTION INSPECTION DAILY REPORTS**

<b>Date</b>	<b>Report #</b>	<b>Pics</b>	<b>Location</b>	<b>Operation</b>
Mon,				
Tue,				
Wed,				
Thu,				
Fri, 1				
Sat,				

**SUMMARY OF CONTACTS AND LANDOWNERS OR MONITOR CONCERNS**

<b>Date</b>	<b>Name</b>	<b>File # / Agency</b>	<b>Concerns / Action</b>	<b>Resolved</b>

**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

## UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE CONSTRUCTION WET SOIL SHUTDOWN REPORT

<b>Date</b> <b>Report No.</b>	<b>Contractor Name</b> <b>Monitor Name</b>	Cordner Science
----------------------------------	---	-----------------

<b>LOCATION</b>			
County	Middlesex	Township	Strathroy-Caradoc and Middlesex Centre
Conc		Lot	
From Station	Strathroy	To Station	Lobo

<b>DECISION TO SUSPEND WORK</b>			
Time _____	By _____	Of _____	
All Activities Shut Down?	_____	No _____	
Suspended Operations and / or Locations of Work Today			
Continuing Operations and Locations of Work Today			

<b>RAINFALL INFORMATION:</b>

<b>WEATHER REPORT</b>	
Source:	
Yesterday's Rainfall	
Today's Weather	
Tomorrow's Forecast	

<b>GROUND CONDITIONS / GENERAL COMMENTS</b>

\_\_\_\_\_  
Monitor's Signature

**UNION GAS LIMITED STRATHROY TO LOBO NPS 48 PIPELINE  
CONSTRUCTION MONITOR CONTACT REPORT**

<b>Date:</b>	<b>Contractor Name:</b>
<b>Report No.:</b>	<b>Monitor Name:</b>

SUMMARY OF CONTACTS (Attach Separate Records of Telephone / Discussion as needed.)		
Name	File # / Agency	Concern / Action / Comment

---

**Monitor's Signature**



May 11th, 2009

**BY RESS & COURIER**

Ms. Zora Crnojacki, Project Advisor  
Ontario Energy Board  
Suite 2700, 2300 Yonge Street  
Toronto, Ontario  
M4P 1E4

Dear Ms. Crnojacki:

**Re: Union Gas Limited**  
**TFEP 2007 – Strathroy to Lobo Pipeline Project**  
**EB-2005-0550**

This letter is in response to the final report prepared by Cordner Science (“Cordner”) for Construction Monitoring services for the NPS 48 Strathroy Lobo Pipeline project.

Union’s understanding of the primary role that Cordner was to undertake during construction of the Strathroy Lobo pipeline was that of a compliance monitor. As well the Monitor was to observe and report on pipeline construction activities for the 2007 Union Gas Limited (Union) 48” pipeline from Strathroy to Lobo. Observation was to 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 was also 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 and all specific construction commitments included in Union’s construction contract.

After construction the Monitor was to prepare a final report generally summarizing all reports completed during construction and this was to be provided at the end of the contract term to all parties. The report was to contain at a minimum, recommendations in respect to the following: Communications with landowners and the Committee, Potential construction activity improvements, and reporting requirements.

Union is pleased to note that Cordner did not identify any significant compliance issues. Union believes that the report is a true reflection of the efforts that are undertaken by Union to implement the OEB’s conditions of approval, the recommendations in the Environmental Assessment, the commitments identified in the Letter of Understanding and Union’s construction specifications.

In reviewing Cordner's report the recommendations relate more to general issues and potential improvements in communication and process issues rather than detailed compliance issues. Union has addressed the recommendations in the attached document.

For the Board's information the total invoices submitted by Cordner to date are \$172,000.

Based on Cordner's final report Union does not believe that a Construction Monitor will be required for the next Dawn Trafalgar loops.

Yours truly,

A handwritten signature in black ink, appearing to read 'W Wachsmuth', with a stylized, cursive script.

Bill Wachsmuth  
Senior Administrator, Regulatory Projects  
Encl.  
:mjp

cc: Neil McKay, Manager, Facilities Applications  
G. Mallette

Union's Response to  
Recommendation by Cordner Science

Final Report  
Construction Monitoring  
NPS 48 Strathroy Lobo Project

In the final report prepared by Cordner Science for Construction Monitoring of the Strathroy Lob pipeline project 39 recommendations were identified. A number of these recommendations can be incorporated into five groups of issues, which are identified below. The recommendations that are more stand alone have been addressed individually.

The following is Union's response to Cordner's recommendations:

**Communications and Actions of the Monitor**

Recommendations 2, 3, 4, 5, 6, 7, 21, and 39

These recommendations discuss the interaction and communication between the Monitor Union, the Construction Monitor Committee, Landowners, and the Joint Committee. As it has been over 15 years since this type of monitor was used on a construction project there was a learning curve that occurred between all of the interested parties to understand their respective roles and responsibilities. Union understands the issues that Cordner is raising in these recommendations, and will provide these recommendations to any future monitors to assist them in the communications and understanding roles and responsibilities.

**Lands Relation Agent**

Recommendations 9 and 10

Union agrees with these recommendations, and the value in having only one Land Relations Agent for both the construction and post-construction clean up work for the project. Union had planned to have the same agent who was on site during construction continue with the project for the year after clean up, however due to an unforeseen long-term illness this was not possible. Union will implement the Monitor's suggestion that all future lands agent have access to e mail.

**Education of Landowners**

Recommendations 16, 17, 18, 19, 26, 24, 27, 32, and 33

Union understands that these recommendations result from discussions between the Monitor and various parties regarding construction practices including the options that a landowner has regarding construction on their properties and concerns regarding their understanding of the options available to them. These recommendations are most likely

as a result of the above noted Communications recommendations in that Cordner is likely not aware and did not participate in any of the pre-construction negotiations between Union and the various landowner negotiating committees ( GAPLO-Strathroy/Lobo and Bartlett Group)during which these matters were discussed. As well Union has suggested to landowners that if they have any questions regarding any of the terms of the Letter of Understanding or construction practices that they should seek the advice of GAPLO or other experts that are available to them. Union does not believe that Cordner knows or understands the knowledge of construction practices that GAPLO has developed. All of the areas where Cordner suggests that a fact sheet would be useful have been subject to extensive negotiations between Union and GAPLO. Union believes there is an adequate knowledge base in the landowner community, including available information from other landowners if they have questions. As well, Union does not believe that fact sheets developed by Union would be acceptable to GAPLO

**Schedule**

Recommendations 29, 34, 35, 36

The construction schedule is always a concern to both Union and the Landowners. Union attempts to schedule work so that it can be completed at the optimal time. However, this is not always possible. Union is aware of the issues raised by Cordner, and will work with the Pipeline Contractor and the landowners to ensure that construction and restoration are completed in an efficient and timely manner

**Union Documents**

Recommendations 11, 12, 13, 14, 15, 22, 23

Union will consider these recommendations. Union recognizes that Cordner being new to pipeline construction can provide a fresh set of eyes and provides opinions which can be used to develop and improve Union existing practices. Union reviews and updates its forms and documents on a regular basis, and will consider Cordner's suggestions during future reviews.

**Scientific Studies**

Recommendations 37, 38

Cordner has suggested that more scientific rigor should be incorporated into wet soils determination and soil restoration practices (compaction removal). These issues have been brought forward a number of times in the past. Union's current practices are the result of these reviews. The report acknowledges that the CMT supported wet soil decisions made during construction and does not identify any circumstances when visual assessment was not possible. Soil conditions are evaluated on the amount of rainfall, visual assessment, soil consistency, friability and depth rainfall has penetrated. The importance of these factors varies by soil type and is accurately and quickly assessed in the field without detailed instrumented, calculated and documented measurements, which may result in construction delays. Penetrometer data are obtained off-easement as well as on-easement. Union already has a scientific and statistical method available to assess the



agronomic effectiveness of rehabilitation procedures. The soil and crop monitoring program developed by Stantec for Union Gas is a statistically sound method to assess the effectiveness of the soil rehabilitation procedures. Union and Stantec (who provide Union with independent soil experts) continuously review and monitor these areas and make changes when they are appropriate.

### **Separate Phases for Pipeline Construction**

#### **Recommendation 1**

In this recommendation Cordner suggests that pipeline construction should be separated into two distinct operations: construction of the pipeline, and restoration and clean up. While Union can understand why Cordner believes this would be an improvement on current construction practices. Union does not believe the implementation of this recommendation will result in significant efficiencies.

Union sees the following issues in trying to implement this recommendation:

- Currently there are no companies in southern Ontario whose expertise is land restoration after pipeline construction.
- There are contractor, labour union, labour law, and administrative issues with having two separate contractors on the same work site.
- Having two contractors working on the same project often leads to communication issues, construction inefficiencies and missed deadlines.

Union believes the biggest benefit in having the one contractor complete the entire project is that the entity that is responsible for constructing the pipeline is the same entity responsible for restoration. A contractor that knows it will have to restore the site will normally take more care in the construction phase knowing that before they will receive full payment for the project they have to restore the site to pre construction conditions. This coupled with Union's commitment to have the same Lands Relations Agent for both construction and clean-up should address any landowner questions.

### **Landowner Survey**

#### **Recommendation 8**

Union has completed this type of survey in the past. Union does not believe it is necessary to complete this type of survey on every loop of the Dawn Trafalgar system. Unions expect to complete landowner satisfaction surveys on future loops.

### **Compensation**

#### **Recommendation 20**

Union does not understand this recommendation. Financial compensation was negotiated before the OEB facilities hearing. This was almost a year ahead of construction and Union does not understand how this could have distracted the parties from construction

and remediation issues. If this recommendation means waiting to negotiate compensation until after construction, Union doubts that would be acceptable to the landowners

**Wash Stations**

Recommendation 25

Union accepts this recommendation, and will work with the Pipeline Contractor, OMAFRA, and the Soils and Environmental consultants to improve the effectiveness and efficiency of the wash stations

**Stone Picking**

Recommendation 28

Union agrees with Cordner regarding this recommendation. Union's preferred practice in relation to stone picking is to pick stones to the size and quantity as found in the remainder of the field. However, this issue is important to landowners and the size of stones is something that was negotiated in the LOU.

**Depth of Cover**

Recommendation 30, 31

Union accepts this recommendation. The depth of cover over the pipe is important to both Union and the Landowners. Union encourages the landowners to report any situations where cover is reduced over the pipeline. Union will inform the landowner when it becomes aware of any issues in relation to depth of cover on a landowners property.

## COMMISSION DE PROTECTION DU TERRITOIRE AGRICOLE DU QUÉBEC

### IDENTIFICATION DU DOSSIER

<b>Numéros</b>	:	349736 / 349766
<b>Lots, cadastres et circonscriptions foncières</b>	:	Voir description pour chacune des municipalités à la page
<b>Superficies visées</b>	:	Voir tableau 1 – page
<b>Municipalités</b>	:	Saint-Gilles (P), Saint-Agapit (M), Saint-Flavien (M) Dosquet (M), Lyster (M), Laurierville (M) Notre-Dame-de-Lourdes (P), Plessisville (P) Princeville (V), Saint-Rosaire (P), Saint-Valère (M) Saint-Samuel (P), Sainte-Eulalie (M) Saint-Léonard-d'Aston (M), Notre-Dame-du-Bon-Conseil (P) Saint-Cyrille-de-Wendover (M), Drummondville (V) Saint-Majorique-de-Grantham (P) Saint-Germain-de-Grantham (M), Saint-Eugène (M) Sainte-Hélène-de-Bagot (M), Saint-Simon (P) Saint-Hyacinthe (V), La Présentation (P) Saint-Amable (M), Sainte-Julie (V), Varennes (V) Boucherville (V)
<b>MRC</b>	:	Lévis, Lotbinière, L'Érable, Arthabaska, Nicolet-Yamaska, Drummond, Les Maskoutains, La Vallée-du-Richelieu, Lajemmerais, Longueuil
<b>Date</b>	:	Le 25 juin 2008

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### LES MEMBRES PRÉSENTS

Guy Lebeau, commissaire  
Jacques Cartier, commissaire  
M<sup>e</sup> Louis-René Scott, commissaire

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### DEMANDERESSE

Ultramar ltée

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### DÉCISION

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### LE RAPPEL

- [1] La demande formulée par la compagnie Ultramar limitée vise la construction d'un pipeline, identifié comme étant le projet « Pipeline Saint-Laurent », entre sa raffinerie de pétrole à Lévis et son terminal de Montréal-Est.

- [2] Le projet de la demanderesse s'inscrit sur le territoire de 32 municipalités. Toutefois, à ce jour, la demande est recevable à la Commission sur le territoire de 28 de ces 32 municipalités.
- [3] Le 28 novembre 2007, la Commission a formulé une orientation préliminaire favorable à la demande sur le territoire de 17 des 28 municipalités où la demande était recevable. Elle énonçait alors qu'elle souhaitait attendre que le tracé soit recevable dans toutes les municipalités avant de donner suite à l'orientation préliminaire par la tenue d'une rencontre publique.
- [4] Dans une rencontre publique de nature administrative qui a eu lieu le 23 janvier 2008, la demanderesse a dit souhaiter la tenue immédiate d'une rencontre publique sur le fond, ce à quoi la Commission a acquiescé pour les motifs exposés dans son procès-verbal du 1<sup>er</sup> février 2008.
- [5] Les 19 et 26 mars 2008, à Drummondville, la Commission a reçu des documents et entendu les représentants de la demanderesse et de divers organismes, de même que toutes autres personnes voulant s'exprimer sur la demande et l'orientation préliminaire déjà formulée. En tout, en plus des représentants de la demanderesse, 46 personnes ont déposé des documents ou se sont exprimées sur la demande.
- [6] Par la suite, soit le 28 avril 2008, tenant compte des informations obtenues en rencontre publique et des représentations écrites reçues, la Commission a fait part d'une modification de son orientation sur l'issue de la demande pour les 28 municipalités où elle est recevable. Elle entendait autoriser la demande dans ces 28 municipalités mais à certaines conditions.
- [7] Tel que prévu par la Loi, un délai supplémentaire de 10 jours fut accordé aux parties intéressées pour formuler des observations et celles-ci ont été transmises à la demanderesse qui a bénéficié d'un délai supplémentaire de 7 jours pour les commenter, étant donné que la majorité de ces observations ne lui avaient pas été transmises par les tierces parties.
- [8] Par la présente, la Commission rend sa décision à la lumière de toutes les informations obtenues dans le processus de traitement de la demande.

## **LA NATURE JURIDIQUE DE LA DEMANDE**

- [9] La nature de la demande soumise initialement est décrite dans le compte rendu comprenant l'orientation préliminaire. Dans une correspondance du 5 février 2008, la demanderesse a apporté certains ajustements mineurs, dont une modification partielle du tracé sur une distance de quelques centaines de mètres. Lors des rencontres publiques, bien qu'elle s'en remettait au choix de la Commission, elle a signifié son désir de revenir au tracé initial pour une modification qu'elle avait suggérée dans la municipalité de Sainte-Eulalie et, aussi, elle a soumis un amendement pour faire en sorte que sa demande vise au surplus l'aliénation de l'emprise permanente, si celle-ci est jugée nécessaire par la Commission. Il est à noter que la demande ci-après décrite n'inclut pas l'amendement aux superficies en cause soumis par la demanderesse, et ce, à la suite de l'avis de changement.

[10] Ainsi, sur le plan juridique, la demande est décrite de la manière suivante :

- l'aliénation et l'utilisation à une fin autre que l'agriculture, pour une emprise permanente, d'une superficie d'environ 358,8 hectares. L'emprise sera de 18 mètres et sera localisée majoritairement de façon adjacente aux emprises existantes d'Hydro-Québec;
- l'utilisation à des fins autres que l'agriculture pour une aire de travail temporaire d'une superficie d'environ 258,7 hectares. Une surlargeur de 10 à 15 mètres en bordure de l'emprise permanente est prévue. Cette superficie inclut les vannes de sectionnement situées en zone agricole utilisant une superficie de terrain de 50 mètres carrés et les deux gares de raclage situées en zone agricole;
- l'utilisation à des fins autres que l'agriculture, pour une aire de travail temporaire supplémentaire, d'une superficie d'environ 34,2 hectares. Cet espace est requis aux endroits où il y a des obstacles à franchir;
- l'aliénation et l'utilisation à des fins autres que l'agriculture pour l'implantation de postes de pompage sur une superficie de 1,2 hectare.

#### **LA DESCRIPTION DE LA DEMANDE INITIALE**

- [11] Afin de transporter ses produits, tels de l'essence, du mazout domestique, du diesel et du carburéacteur, et faire face à l'augmentation de ses besoins de transport entre Lévis et Montréal, Ultramar ltée désire procéder à la construction, l'entretien et l'exploitation d'un pipeline entre sa raffinerie Jean-Gaulin située à Lévis et son terminal situé à Montréal-Est, dans le cadre du projet «Pipeline Saint-Laurent». Le pipeline, qui représente un investissement d'environ 275 millions de dollars et qui s'inscrit dans des investissements globaux de l'ordre de 1 milliard de dollars, se raccorderait à une conduite située à Boucherville, pour traverser le fleuve jusqu'au terminal.
- [12] Le pipeline, d'un diamètre de 406 mm (16 pouces), aurait une longueur de 238 kilomètres. D'une manière générale, la demande soumise ferait en sorte qu'il serait enfoui à une profondeur de 1,2 mètre en terrain cultivé, et à 0,9 mètre en milieu boisé. On établirait une emprise permanente de 18 mètres de largeur. En milieu boisé, cette emprise demeurerait déboisée, tandis qu'en milieu cultivé, les activités agricoles et culturelles régulières pourraient se poursuivre.
- [13] Des aires de travail temporaires seraient requises pour la durée des travaux sur l'ensemble du tracé. Selon la demande initiale, ces aires auraient 15 mètres de largeur en milieu agricole et 10 mètres en milieu boisé. Lorsque le tracé retenu serait adjacent aux lignes électriques existantes et que les installations d'Hydro-Québec le permettraient, l'aire temporaire de travail serait majoritairement localisée dans l'emprise d'Hydro-Québec. L'aire temporaire de travail est nécessaire pour l'entreposage du sol arable, de déblais d'excavation et pour circuler.

**L'AVIS DE MODIFICATION DE L'ORIENTATION PRÉLIMINAIRE**

- [300] Après avoir pris en considération les informations soumises lors de la rencontre publique, et pondéré à nouveau les critères applicables de la loi, la Commission a fait part, le 28 avril 2008, des principaux motifs l'amenant maintenant à faire droit à la demande à certaines conditions.
- [301] Un délai de 10 jours a été accordé aux intéressés pour formuler des représentations sur cet avis de modification de l'orientation préliminaire.
- [302] Par la suite, un délai de 7 jours fut accordé à la demanderesse pour formuler des observations sur les représentations obtenues par la Commission, étant donné que la majorité de ces observations n'avaient pas été transmises à la demanderesse par les tierces parties.

**LES OBSERVATIONS ADDITIONNELLES**

- [303] Les observations additionnelles soumises se résument ainsi :

De la part de la demanderesse (2 documents)

- [304] Quelques corrections doivent être apportées sur certaines des superficies visées, des dates ou des informations soumises antérieurement.
- [305] Il faudrait modifier la condition 4 pour que celle-ci reflète la réalité de réalisation des travaux dans les circonstances et le cadre réglementaire connu, c'est-à-dire en respectant le fait que dans certaines situations, il est possible que les travaux de réaménagement ne puissent s'effectuer au cours de la même année que celle de la construction.
- [306] Il ne serait pas approprié de prévoir à tous égards, c'est-à-dire pour l'ensemble du tracé projeté du pipeline, une profondeur supérieure à 1,2 mètre en milieu cultivé et 0,9 mètre en milieu boisé, étant compris que des mesures d'atténuation particulières et spécifiques aux circonstances propres aux lots concernés sont déjà prévues et d'autres pourront l'être, et ce, en fonction des faits spécifiques et particuliers aux lots concernés (par opposition à une prise de position « à tous égards », c'est-à-dire qui prévaut sur l'ensemble du tracé projeté du pipeline). L'enfouissement à une profondeur plus grande s'avère un précédent inéquitable pour Ultramar dans un environnement de compétitivité.
- [307] L'article 112 de la Loi sur l'Office national de l'énergie (ONE) interdit à quiconque de se livrer à des travaux d'excavation (sans autorisation) avec de l'équipement motorisé dans un périmètre de 30 mètres autour d'un pipeline. Même si le projet visé n'est pas assujéti à cette loi en raison de circonstances juridiques particulières, on ne pourrait concilier avec cette loi la condition imposée par la Commission visant à ce que la profondeur des travaux permis avant de devoir aviser la compagnie, soit majorée à 60 cm en milieu cultivé et à 45 cm en milieu boisé.

- [308] La Commission ne devrait retenir qu'une seule norme de profondeur pour aviser la compagnie et celle-ci devrait être de 40 cm tel que proposé, pour des raisons de cohérence et de sécurité.
- [309] Si la Commission maintient la profondeur d'enfouissement du pipeline énoncée dans son avis de changement, soit 1,6 mètre en milieu cultivé et 1,2 mètre en milieu forestier, la demande est amendée pour :
- en milieu cultivé, ajouter 5 mètres d'emprise permanente, ce qui représente une superficie additionnelle d'environ 58 hectares;
  - en milieu boisé, ajouter 5 mètres d'emprise temporaire pour la réalisation des travaux, qui seront utilisés au besoin, ce qui représente une superficie additionnelle d'environ 41 hectares.
- [310] La Commission ne devrait pas retenir les suggestions du Syndicat de l'UPA de Kennedy, de l'apPAF et de la Fédération de l'UPA de Saint-Hyacinthe à l'effet d'augmenter la restriction de construction sur des distances variant entre 3 et 7 kilomètres en bordure du territoire des municipalités dont le territoire n'a pas été étudié par la Commission. Ces restrictions représentent des «refus de l'autorisation demandée» et accordée par la Commission, alors qu'un adage juridique est à l'effet que «donner et retenir ne vaut».

De la part de l'UPA de Saint-Hyacinthe

- [311] Il souhaite toujours que l'on emprunte un tracé alternatif puisque le tracé actuel est susceptible de nuire à l'expansion des bâtiments de ferme et autres infrastructures actuelles et éventuelles.
- [312] Il est d'accord avec les conditions 1 et 2 suggérées par la Commission.
- [313] Il accepte une profondeur minimale de 1,6 mètre avec une possibilité de décompaction (sous-solage), mais souhaiterait que le pipeline soit installé sous les drains souterrains lorsque ceux-ci se trouvent à cette profondeur.
- [314] Il préfère que la profondeur de 1,6 mètre soit exigée également dans les milieux forestiers.
- [315] Il désire que la décision de la Commission soit assujettie au respect des mesures d'atténuation prévues par l'Entente-Cadre UPA-Ultramar.
- [316] Il demande que la condition 5 soit ajustée de telle sorte que le mandat de l'agent de liaison se termine 7 ans après la fin des derniers travaux de remise en culture,
- [317] Enfin, il souhaite que la distance prévue à la condition 6 pour la non-construction en bordure des municipalités où le tracé n'a pas été étudié, soit majorée de 1 kilomètre à 6 kilomètres, afin de respecter les possibilités d'alternatives envisagées.

De la part de l'UPA du Centre-du-Québec

- [318] Il souhaite toujours que le tracé passe au nord du chemin du rang 13 pour éviter les terres en culture situées du côté sud.
- [319] Il désire toujours que la valve de sectionnement et la station de pompage soient déplacées dans la municipalité de Sainte-Eulalie afin de minimiser les incidences sur l'agriculture.

De la part de l'UPA de Saint-Jean-Valleyfield

- [320] Il souhaite que la décision soit assujettie aux mesures d'atténuation prévues dans l'Entente-Cadre UPA-Ultramar.

De la part de l'apPAF

- [321] Elle estime que la Commission ne peut autoriser le tracé tel que proposé et l'utilisation des chemins de ferme et réitère que ce projet ne peut limiter l'exercice des activités agricoles en zone agricole.
- [322] Elle souhaite que les conditions envisagées soient modifiées et que la décision prévoit de nouvelles conditions, dont notamment l'enfouissement du pipeline à 2 mètres, qu'elle permette les travaux sans restriction jusqu'à 75 centimètres de profondeur, qu'elle restreigne la construction du pipeline en deçà de 3 kilomètres du territoire d'une municipalité n'ayant pas reçu une autorisation, que le dépôt par le promoteur, soit exigé, d'une garantie pour la réalisation convenable des travaux et que la surveillance des travaux soit assurée par une personne neutre.
- [323] Elle demande qu'Ultramar revoie certaines de ses interventions relativement :
- à la capacité portante au-dessus du pipeline;
  - au délai de réponse face aux demandes des propriétaires;
  - à la production de plans détaillés pour la réhabilitation des lieux qui devra se faire rapidement;
  - au maintien des capacités «bio» des sols en cause;
  - à l'entretien de l'emprise et à son reboisement avec des essences compatibles;
  - à la preuve relative au respect environnemental sur demande d'une institution financière, et au défraiement des coûts afférents;
  - à la non-utilisation des chemins de ferme;
  - à l'enlèvement du pipeline advenant la cessation de son utilisation pendant plus de 10 ans et la remise en état subséquente des lieux;
  - à l'information auprès de la Commission, des municipalités et des propriétaires en cas d'accidents ou d'incidents concernant le pipeline et ses installations;



- [324] Il est à noter que la Commission a reçu d'autres observations qui reprennent pour l'essentiel les observations formulées antérieurement par l'apPAF ou lors de la rencontre publique. Ces écrits ont été transmis par les personnes suivantes :
- Ferme Pacotine, Louise Martineau, Fernand Fillion, Pascale Fillion;
  - Germain Richard;
  - Guy Turcotte et Lucie S. Turcotte;
  - Martin Scott;
  - Nathalie Pouliot;
  - Pauline et Eudore Dallaire.
- [325] Par ailleurs, un autre intervenant, Alain Beaudoin, a signifié que le dossier contenait certaines irrégularités, sans plus de précision, et a signifié aux membres de la Commission d'être prudent avant de rendre la décision.

## **L'APPRÉCIATION DE LA DEMANDE**

- [326] Avant de traiter de la demande sur le fond, la Commission doit disposer d'une demande de récusation formulée par un des propriétaires concernés.
- [327] En effet, par une correspondance du 15 mars 2008, monsieur Alain Beaudoin, propriétaire concerné par la présente demande, formulait une «demande de retrait» du président de la formation pour la Commission, monsieur Guy Lebeau, commissaire. Dans sa lettre, monsieur Beaudoin soumet que le fait qu'une orientation préliminaire favorable ait été formulée, «discrédite la décision à venir de la Commission». À cela, la Commission doit répondre qu'il n'y a pas matière à récusation pour les motifs exposés par monsieur Beaudoin.
- [328] L'orientation préliminaire à laquelle il réfère est prévue par l'article 60.1 de la Loi sur la protection du territoire et des activités agricoles (ci-après appelée la Loi) et la Commission doit énoncer une telle orientation avant de disposer de la demande. Ce document permet d'établir que toutes les informations qu'elle entend utiliser pour rendre une décision sont justes et pertinentes et quelle serait sa décision en fonction de l'étude de ces éléments.
- [329] On peut ne pas partager le point de vue des commissaires qui énoncent une orientation préliminaire, mais cette divergence d'opinions n'en fait pas pour autant une cause à récusation.
- [330] Cette demande de récusation est donc rejetée.

- [331] Cela dit, après avoir énoncé son orientation préliminaire, avoir entendu les observations des personnes intéressées lors des deux jours d'audition publique, avoir reçu des observations supplémentaires à la suite de l'avis de changement formulé, après avoir réévalué l'ensemble de la demande pour chacune des municipalités concernées en se basant sur les dispositions décisionnelles applicables de la loi, soit les articles 12 et 62, la Commission dispose maintenant de la demande comme suit.
- [332] Pour les motifs ci-après exposés, d'une part, la Commission accepte, à certaines conditions, le projet d'implantation d'un pipeline sur le tracé visé tel qu'amendé par la demanderesse selon sa correspondance du 5 février 2008, incluant le tracé soumis à ce moment dans la municipalité de Sainte-Eulalie. D'autre part, la Commission rejette la demande d'aliénation soumise à titre d'amendement lors de la rencontre publique pour l'emprise permanente.
- [333] Toutefois, la Commission autorise la réalisation du projet spécifiquement en faveur de la compagnie demanderesse ou de ses sous-traitants et impose des conditions à sa décision quant à la mise en service du pipeline, à sa profondeur, sur le suivi qui devra être apporté aux travaux relativement au drainage et à la productivité des terres et sur la suspension de l'autorisation pour une partie du tracé en attente d'une décision pour les municipalités manquantes.
- [334] Finalement, la demande est autorisée sur les superficies telles qu'amendées à la suite de l'avis de changement formulé.
- [335] Voici maintenant les motifs qui soutiennent cette décision :
- [336] Tout d'abord, la Commission ne peut remettre en cause le projet de la demanderesse. Ultramar ltée a légalement saisi la Commission d'une demande sur le territoire de 28 municipalités et la Commission doit disposer de celle-ci en vertu des critères applicables de la Loi, et aucun autre élément ne se rapportant pas aux critères décisionnels ne peut être considéré pour la prise de décision comme en fait état l'article 62.1 de la Loi. Or, aucun de ces critères ne permet à la Commission d'analyser la nécessité du projet ou de proposer une alternative au transport de produits pétroliers, tel le transport par bateau par exemple. En bref, la Commission peut étudier des sites alternatifs pour l'implantation du pipeline, mais pas une alternative au transport de produits pétroliers.
- [337] Ensuite, la Commission fait part qu'elle a été légalement saisie d'une demande d'autorisation pour aliénation de l'emprise permanente alors que la demanderesse a amendé sa demande en ce sens, en rencontre publique. La Commission considère que toute la demande a été bien exposée aux municipalités concernées qui ont, par la suite, exprimé leur position sur le projet soumis. Toutefois, semblable demande d'aliénation est rejetée parce que non nécessaire. En effet, si l'implantation d'une conduite souterraine peut devoir créer entre les parties un droit de propriété superficière (sur une superficie indéterminée mais certainement beaucoup moindre que celle visée par l'emprise totale) de telle sorte à éviter un changement de la propriété de la conduite par accession au bénéfice du propriétaire du fond de terre, une telle cession d'un droit de propriété superficière n'est pas celle qu'envisage la Loi à son article 1, paragraphe 3, puisqu'il s'agit là d'un contexte différent.

- [338] Bref, la création, s'il y a lieu, de cette propriété superficière au sens du Code civil, ne crée pas de morcellement (article 28) ou de démembrement (article 29) au sol, ce que régit la Loi. Elle ne rompt pas la contiguïté des parcelles sises de part et d'autre de l'emprise; de fait, elle ne rompt pas davantage la « continuité » de la propriété du sol, de chaque côté comme sur l'emprise qui sera enfouie.
- [339] Cette modalité du droit de propriété n'a en effet aucune conséquence sur le fond de terre lui-même et particulièrement sur la protection du territoire et des activités agricoles, autre que celles qui découlent d'autres modalités juridiques qui, elles non plus, ne constituent pas une aliénation au sens de la loi : c'est le cas d'une servitude de passage qui reflète d'ailleurs davantage la véritable nature des effets pratiques recherchés par la compagnie demanderesse sur les propriétés où sera enfouie la conduite.
- [340] Pour ce qui est de l'étude de la demande sur le fond, la Commission constate que le tracé soumis par la demanderesse soustrait environ 1,5 hectare de terre à l'agriculture, soit l'espace requis pour les postes de pompage et les vannes de sectionnement. Tout tracé alternatif étudié impliquerait l'utilisation de superficies perdues dans le même ordre de grandeur par rapport à l'ensemble de la demande. Pour le reste, la demande génère des contraintes à l'exercice de certaines activités agricoles ou forestières, mais les superficies visées peuvent toujours être utilisées pour des fins agricoles en milieu cultivé, alors qu'en milieu sylvicole, l'emprise permanente ne peut être reboisée, mais pourrait être utilisée pour certaines activités de nature agricole ou sylvicole.
- [341] Une autorisation à cette demande d'utilisation à des fins autres que l'agriculture ne soustrait donc pas à l'agriculture l'ensemble des superficies visées par la demande. En fait, toutes ces superficies seraient toujours utilisables pour des fins d'agriculture au terme d'une autorisation de la demande, sauf pour une superficie d'environ 1,5 hectare qui serait réellement perdue.
- [342] L'impact de la demande soumise par Ultramar Ltée n'est pas anodin ou négligeable, mais il est tout de même relatif par rapport à d'autres demandes qui visent à soustraire toutes formes d'agriculture sur l'ensemble des superficies touchées, telles des usages industriels, commerciaux ou résidentiels qui amputent carrément l'espace utilisable pour des fins agricoles à long terme. En fait, 99,98% des superficies visées par la demande d'Ultramar Ltée seront toujours utilisables en agriculture, mais à certaines conditions, au terme des travaux de réaménagement.
- [343] Pour la Commission, le premier objet de la décision à prendre est de déterminer si l'utilisation d'un tracé alternatif, à proximité de l'autoroute 20 ou ailleurs, limiterait significativement les impacts de la demande sur l'agriculture et la sylviculture.
- [344] Après avoir étudié toute la preuve relative aux alternatives potentielles avec ses variantes, incluant celle soumise par la Fédération de l'UPA du Centre-du-Québec en rencontre publique pour le tracé et la vanne de sectionnement, la Commission conclue que les impacts sur l'agriculture de l'implantation du tracé sur des sites alternatifs ne seraient pas significativement moindres, si toutes les mesures d'atténuation sont respectées et si le pipeline est enfoui à une profondeur suffisamment convenable pour éviter d'imposer des contraintes majeures au maintien et au développement des activités agricoles à long terme.

- [345] En fait, la demanderesse a démontré que l'on ne pouvait utiliser l'emprise de l'autoroute 20 et que la juxtaposition du tracé à l'emprise du MTQ commanderait l'utilisation de superficies plus grandes de bons potentiels agricoles pour la réalisation du projet. Donc, au moins autant de propriétaires, producteurs agricoles ou forestiers vivraient des problèmes identiques. Au surplus, la demanderesse a démontré que le pipeline ne pouvait être implanté sur le tracé autorisé en 1993, ce qui lui aurait permis d'éviter de présenter une demande à la CPTAQ, avec les frais et les délais que cela encoure, en raison des constructions réalisées depuis ce temps à plusieurs endroits. Il faudrait donc que des variantes de tracé soient envisagées, ce qui amènerait des impacts pour des propriétaires différents, sur des terres de bons potentiels agricoles. Cela ne ferait que déplacer les contraintes.
- [346] Pour la Commission, la solution proposée par la demanderesse de juxtaposer son tracé aux infrastructures électriques est appropriée dans le cas présent, pourvu que l'on s'assure que les possibilités d'utilisation à des fins agricoles et sylvicoles des lots soient maintenues à long terme, et le premier aspect à considérer s'avère être la profondeur d'enfouissement du pipeline.
- [347] Sur cet aspect, la demanderesse propose une profondeur générale minimale de 0,9 mètre en milieu forestier et de 1,2 mètre en milieu agricole. Or, à cette profondeur, le pipeline se retrouve à la même hauteur où sont généralement aménagés les drains souterrains sur les terres cultivées. La Commission reconnaît que plusieurs de ses décisions antérieures ont référé à ces profondeurs proposées par la demanderesse, mais la majorité des décisions antérieures se retrouvaient dans des contextes différents quant à la localisation. De fait, la Commission n'a recensé aucun pipeline reliant deux points aussi éloignés dont la majorité du tracé n'est pas juxtaposé à un chemin public. En ce sens, la demanderesse innove en proposant un tracé juxtaposé majoritairement à une ligne électrique et ainsi, la Commission apparaît justifiée d'innover relativement à la profondeur d'enfouissement du pipeline.
- [348] Cela dit, la proposition de la compagnie fait en sorte que c'est le propriétaire actuel d'un lot qui décide de la possibilité ou non de drainer une terre pour les générations futures. Par ailleurs, nul ne peut prédire avec certitude de quelle manière seront utilisées les terres actuellement boisées dans 40, 50 ou 60 ans. Or, la Commission doit voir à préserver les possibilités d'utilisation futures des lots situés en zone agricole. Aussi, la Commission estime que la profondeur suggérée par la demanderesse amène à requérir des autorisations par écrit pour des travaux qui sont tout de même assez courants dans les milieux agricoles dynamiques traversés par le tracé. Dans ce contexte, il apparaît justifié que la profondeur minimale du pipeline soit ajustée en fonction des besoins actuels et futurs de l'agriculture et de la foresterie sur toute la longueur du pipeline.
- [349] La Commission estime donc (même après étude de l'argumentaire soumis par la demanderesse à la suite de l'avis de changement) que la profondeur minimale d'implantation du pipeline devra être de 1,6 mètre dans les milieux cultivés et de 1,2 mètre dans les milieux boisés. La Commission permettra toutefois à la demanderesse de ramener la profondeur du pipeline à 1,2 mètre en milieu cultivé et à 0,9 mètre en milieu boisé lorsque, lors de l'enfouissement du pipeline, la roche-mère sera touchée avant cette profondeur.

- [350] Exiger que le pipeline soit implanté à ces profondeurs doit aussi permettre à la demanderesse d'augmenter celle à laquelle les propriétaires devront obtenir une permission pour réaliser certains travaux agricoles ou forestiers. Cette profondeur doit être portée à 60 centimètres dans les milieux cultivés et à 45 centimètres dans les milieux boisés. Une telle augmentation de la profondeur doit aussi modifier le type de travaux permis sans que cela nécessite une demande écrite auprès de la compagnie, notamment en ce qui concerne l'utilisation d'une sous-soleuse, pour la décompaction des sols, dont la profondeur des travaux peut atteindre 55 à 60 centimètres. Aussi, la Commission constate que le nivellement pour lequel un avis doit être requis aurait avantage à être précisé par la demanderesse. La Commission estime que certains travaux de nivellement de surface, à des profondeurs variant entre 15 et 30 centimètres, réalisés couramment par des agriculteurs eux-mêmes (et non par des professionnels à des profondeurs importantes) ne devraient y être assujettis.
- [351] Le fait d'établir deux normes avant d'aviser la compagnie n'apparaît pas si compliqué pour la Commission dans la mesure où elle souhaite que seule la décompaction par sous-solage soit ajouté aux travaux ne nécessitant pas d'avis à la demanderesse avant d'être effectué, alors que les autres travaux convenus sont déjà énumérés dans l'entente-cadre intervenue avec l'UPA et dans les ententes prévues avec les propriétaires.
- [352] La demanderesse a fait part que de telles conditions relatives à l'enfouissement pour des profondeurs de 1,6 mètre en milieu cultivé et de 1,2 mètre en milieu boisé engendrent l'élargissement de 5 mètres de l'emprise permanente en milieu cultivé et de l'emprise temporaire en milieu boisé.
- [353] Tel qu'énoncé dans l'avis de changement, la Commission accepte de faire droit à cet amendement à la demande, même si une aire de travail (permanente et temporaire) totale potentielle de 38 mètres lui apparaît très large, soit à la limite du raisonnable. La Commission est toutefois confiante du fait qu'Ultramar Ltée cherchera à limiter la largeur de ces emprises pour ne pas empiéter inutilement sur les terres en cause, lui permettant ainsi de réduire ses coûts d'acquisition et de réaménagement. De telles surlargeurs perturberont temporairement de plus grandes superficies utilisées à des fins agricoles, mais la Commission estime que ces contraintes temporaires seront largement compensées par l'assurance d'un maintien des possibilités d'utilisation à des fins d'agriculture de l'ensemble des lots visés à long terme, principalement en ce qui concerne le drainage de surface ou souterrain. Aussi, même si tel n'est pas l'objectif premier recherché par cette condition, le fait d'enfouir la conduite d'au moins 30 centimètres de plus que la profondeur prévue rassurera certainement plusieurs propriétaires qui craignaient «d'accrocher» le pipeline dans la réalisation de leurs travaux courants, ce qui pourrait engendrer des conséquences importantes pour eux.
- [354] La demanderesse soumet que cette condition n'est pas conciliable avec les normes prévues par l'ONE au niveau canadien, mais ces normes ne s'appliquent pas pour son projet. Pour un cas particulier comme celui soumis, la Commission, de par son mandat, estime qu'elle est justifiée de retenir ces profondeurs pour l'ensemble du tracé.

- [355] Par ailleurs, il est clair que l'enfouissement du pipeline à ces profondeurs sur l'ensemble du tracé occasionnera des coûts supplémentaires qu'on ne peut estimer avec certitude à ce stade-ci. Toutefois, en rencontre publique, un représentant d'Ultramar Ltée a fait part que le fait d'enfouir le pipeline à une profondeur 2 mètres sur toute la longueur engendrerait des coûts estimés entre 10 et 20 millions de dollars. Or, la condition imposée par la Commission ramène le pipeline à une profondeur moindre, donc à des coûts moindres. Cela dit, la Commission reconnaît que cette condition pourrait représenter beaucoup d'argent supplémentaire à déboursier pour la compagnie demanderesse, peut-être de l'ordre de 5 à 10 millions de dollars. Toutefois, lorsqu'on relativise ces coûts par rapport au projet de pipeline, cela représente un dépassement de coûts de l'ordre de 2% à 4% et, si on considère l'ensemble des investissements prévus par Ultramar Ltée, cela représente moins de 0,01%, ce qui ne semble pas excessif, si on tient compte du fait que cela garantira le maintien des possibilités d'utilisation à des fins agricoles des lots visés à long terme.
- [356] Un autre aspect sur lequel les propriétaires agriculteurs et sylviculteurs de même que la Commission ont besoin d'être rassurés concerne les possibilités de perturbation du drainage des terres et le maintien de leur productivité à long terme, notamment lorsque les drains souterrains se trouvent à la même profondeur que le pipeline. Après avoir pris connaissance des observations soumises à la suite de l'avis de changement, la Commission maintient et précise la condition signifiant à la demanderesse que la réalisation du projet ne devra causer aucun problème au drainage des terres et à la productivité des sols.
- [357] La Commission estime que les travaux d'implantation ne devront pas soustraire plus que deux saisons de végétation et que les terres cultivées devront avoir retrouvé des conditions similaires de production un an après les derniers travaux de remise en culture. Aussi, Ultramar Ltée devra assurer le suivi de cette condition pendant une période de 7 ans à partir de cette date. Ainsi, par cette condition, un suivi pourra être effectué pour assurer son respect.
- [358] Dans ce contexte, si un propriétaire prétend que le pipeline a causé des problèmes de drainage sur sa terre ou que celle-ci présente des problèmes de productivité, il pourra, un an après les derniers travaux de remise en culture, en aviser la Commission. Elle pourra effectuer un suivi des conditions de la décision comme le permet l'article 14 de la Loi. À ce moment, la compagnie devra faire documenter le problème par un agronome qui soumettra une recommandation sur les correctifs à apporter. La compagnie devra réaliser les correctifs. Si le problème s'avère fondé et qu'il n'est pas résolu à la satisfaction du propriétaire, la Commission pourra émettre une ordonnance afin que les correctifs soient apportés et que la condition soit respectée.
- [359] Pour les mêmes considérations et pour faciliter l'interaction entre la compagnie, les propriétaires et la Commission, une condition imposera à Ultramar Ltée l'obligation d'identifier un agent de liaison, lequel poste sera maintenu pendant les 7 ans suivant les derniers travaux de remise en culture.

- [360] Dans un autre ordre d'idée, la Commission a étudié la suggestion de certaines personnes souhaitant que l'autorisation soit accordée spécifiquement pour la demanderesse et qu'elle soit valide pour un temps déterminé, équivalent à la vie utile de la conduite. Sur cet aspect, la Commission estime effectivement qu'il est approprié que la demande soit autorisée spécifiquement pour la compagnie Ultramar ltée. Celle-ci a convenu d'une entente-cadre avec l'UPA à différents niveaux et il est à craindre qu'une compagnie différente ne se sente pas liée par cette entente qui assure une certaine garantie pour les agriculteurs et les sylviculteurs. D'ailleurs, la Commission a étudié la possibilité d'assujettir sa décision au respect de l'ensemble des mesures d'atténuation prévues dans l'entente-cadre, mais cette option ne fut pas retenue, la Commission préférant ne retenir que les points essentiels et facilement sanctionnables pour garantir la protection du territoire et des activités agricoles. Retenir cette option aurait pu faire en sorte qu'une plainte soit déposée à la Commission puisqu'un représentant de l'UPA n'a pas été avisé pour la surveillance des travaux ou quelque'autres objets pour lesquels la Commission n'a pas à intervenir, mais trouve tout de même intéressant en terme de suivi.
- [361] Par ailleurs, quant à la durée de temps pour laquelle l'autorisation est valide, la Commission ne peut retenir l'option de rendre la décision caduque en relation avec la vie utile de la conduite. Il serait difficile d'assurer le suivi d'une telle condition variable dans le temps et imprécise. Cependant, la Commission estime qu'elle doit faire en sorte que la décision devienne inopérante et de nul effet, si la conduite n'est pas mise en service après 5 ans à compter de la date de la décision. En fait, la Commission estime qu'après ce délai, l'évolution de l'agriculture pourra faire en sorte que les besoins de mesures de mitigation nécessaires pour l'implantation d'un pipeline soient revus. L'exemple de la décision rendue en 1993 est concret. Le tracé alors prévu ne convient plus aux besoins d'aujourd'hui, alors aussi bien rendre caduque la décision si le projet ne se réalise pas, plutôt que de laisser perdurer une autorisation inopérante à perpétuité.
- [362] La Commission ne pourrait exprimer sa position sans traiter de sujets tels l'impact de la demande sur l'environnement, les dédommagements pour le passage du pipeline et l'immunité en cas de dommages causés au pipeline.
- [363] Lors de la rencontre publique, la Commission a signifié clairement que certains éléments des impacts appréhendés par la demande ne sont pas de son ressort, soit les risques de fuites du pipeline, l'immunité en cas de bris du pipeline par un propriétaire, la présence de plomb sur la conduite et les dédommagements qui seront offerts aux propriétaires. Les aspects relatifs à l'impact sur l'environnement ont été considérés par le Bureau d'audiences publiques sur l'environnement (BAPE), alors que le Tribunal de l'expropriation verra, s'il y a lieu, à déterminer si les compensations offertes sont suffisantes pour les gens qui contesteront cette offre. Aucun critère de la Loi ne permet à la Commission d'intervenir sur ces aspects et d'imposer des conditions.

- [364] Comme toutes les autres qui lui sont soumises, la Commission a évalué cette demande en prenant pour acquis, comme la Loi le prévoit à l'article 98, que la demanderesse obtiendra tous les permis nécessaires en vertu d'une autre loi ou d'un règlement du gouvernement ou d'un règlement municipal.
- [365] En terminant, il faut indiquer que la Commission a décidé d'étudier la demande même si une partie de celle-ci n'était pas recevable sur le territoire de quatre municipalités. À ce sujet, une dernière condition est imposée dans sa décision.
- [366] Pour éviter que la demanderesse ne réalise des travaux de préparation du terrain et la construction du pipeline sur certaines portions de territoire contigu aux territoires municipaux où la Commission n'est pas légalement saisie de la demande, ce qui créerait des points de rattachement pour ces municipalités, la demanderesse ne pourra débiter les travaux d'aménagement du terrain et de construction du pipeline à l'intérieur d'une distance établie du territoire des municipalités de Lévis, Saint-Marc-sur-Richelieu, Saint-Charles-sur-Richelieu et Saint-Mathieu-de-Beloeil, tant que le pipeline n'aura pas été autorisé sur le territoire de ces municipalités.
- [367] Quant à la distance à retenir, élément sur lequel la Commission a reçu plusieurs observations à la suite de l'avis de changement, elle estime justifié de se rendre aux arguments soumis par l'apPAF, le Syndicat de l'UPA Kennedy et la Fédération de l'UPA de Saint-Hyacinthe à l'effet que cette distance devrait être de 3 kilomètres à partir de la limite de la Ville de Lévis, et de 6 kilomètres pour les villes de Saint-Marc-sur-Richelieu, Saint-Charles-sur-Richelieu et Saint-Mathieu-de-Beloeil.
- [368] La demanderesse a sollicité de la Commission qu'elle traite sa demande malgré le fait que le tracé n'était pas recevable dans certaines municipalités, il faut donc laisser toutes les possibilités ouvertes quant aux tracés alternatifs qui pourraient être étudiés dans ces municipalités. Cette condition suspensive de la prise d'effet apparaît pleinement justifiée dans ces circonstances particulières.

#### **PAR CES MOTIFS, LA COMMISSION**

**REJETTE** la demande d'autorisation pour aliénation par cession de droits superficiaires pour l'emprise permanente parce que non nécessaire;



**AUTORISE, aux conditions ci-après énoncées**, aux fins d'implantation d'un pipeline, l'aliénation et l'utilisation à des fins non agricoles (UNA) pour les usages et les lots tels que décrits pour chacune des municipalités et sur les superficies apparaissant au tableau suivant, lequel inclut les superficies telles qu'amendées par la demanderesse à la suite de l'avis de changement:

Tableau résumé : type d'autorisation et superficies autorisées

Numéros Dossiers	Municipalité	Utilisation à des fins autres que l'agriculture	Utilisation à des fins autres que l'agriculture, temporaire		Aliénation et utilisation à des fins autres que l'agriculture
		Emprise permanente (≈ ha)	Adjacente à l'emprise permanente (≈ ha)	Traversée d'obstacles (≈ ha)	Poste de pompage (≈ ha)
349736	Saint-Gilles	7,7	4,9	0,6	0
349737	Saint-Agapit	24,6	17,1	1,9	0
349738	Saint-Flavien	0,0	0,01	0,0	0
349739	Dosquet	24,8	17,5	1,5	0
349740	Lyster	24,3	17,8	1,6	0
349741	Laurierville	11,2	7,7	1,3	0
349742	Notre-Dame-de-Lourdes	15,1	12,4	1,4	0,6
349743	Plessisville	8,3	7,8	0,3	0
349744	Princeville	15,9	12,1	0,4	0
349745	Saint-Rosaire	19,4	15,1	1,5	0
349746	Saint-Valère	21,0	15,1	1,2	0
349747	Saint-Samuel	5,9	4,2	0,3	0
349748	Sainte-Eulalie	20,3	14,3	0,7	0
349749	Saint-Léonard-d'Aston	7,8	4,8	1,2	0
349750	Notre-Dame-du-Bon-Conseil	24,3	15,8	1,8	0
349751	Saint-Cyrille-de-Wendover	14,2	9,4	1,2	0
349752	Drummondville	15,3	9,0	2,1	0
349753	Saint-Majorique-de-Grantham	13,5	9,2	1,5	0,6
349754	Saint-Germain-de-Grantham	17,9	12,5	1,8	0
349755	Saint-Eugène	17,1	13,0	1,5	0
349756	Sainte-Hélène-de-Bagot	18,1	11,8	1,5	0
349757	Saint-Simon	15,5	11,1	1,2	0
349758	Saint-Hyacinthe	30,2	19,5	2,5	0
349759	La Présentation	13,0	9,3	1,8	0
349763	Saint-Amable	5,5	3,2	0,6	0
349764	Sainte-Julie	14,4	9,8	0,9	0
349765	Varennes	6,4	4,6	1,4	0
349766	Boucherville	10,0	8,9	0,5	0
<b>Total</b>		<b>421,7</b>	<b>297,91</b>	<b>34,2</b>	<b>1,2</b>

Les parcelles autorisées apparaissent sur les plans déposés au soutien de la demande et sur les plans amendés déposés en date du 5 février 2008, conservés au dossier de la Commission sous la cote A-1.

**LA DÉCISION EST ASSUJETTIE AUX CONDITIONS SUIVANTES**

1. L'autorisation est attribuée spécifiquement en faveur de la compagnie Ultramar ltée et de ses sous-traitants;
2. Si les travaux de construction du pipeline ne sont pas débutés à l'intérieur d'un délai de cinq (5) ans à compter de la date de la décision, celle-ci deviendra inopérante et de nul effet;
3. La profondeur minimale d'implantation du pipeline devra être de 1,6 mètre en milieu cultivé (incluant les superficies boisées remises en culture à la suite des travaux) et de 1,2 mètre en milieu boisé. Toutefois, cette profondeur pourra être ramenée à 1,2 mètre en terrain cultivé, et à 0,9 mètre en milieu boisé lorsque la roche-mère sera atteinte avant cette profondeur. Aussi, la profondeur des travaux agricoles et forestiers permis avant de devoir aviser la compagnie devra être majorée à 60 centimètres en milieu cultivé et à 45 centimètres en milieu boisé. De plus, l'utilisation d'une sous-soleuse pour des fins agricoles devra être permise sans devoir aviser la compagnie que de tels travaux sont effectués;
4. L'implantation du pipeline et la remise en culture des sols ne devront pas excéder deux saisons de végétation. La réalisation du projet ne devra causer aucun problème au drainage des terres et à la productivité des sols, et la demanderesse dispose d'un délai d'un (1) an après les derniers travaux de remise en culture pour que les sols cultivés perturbés regagnent une productivité équivalente à la situation prévalant avant son implantation;
5. Un suivi de la condition 4 devra être assuré par Ultramar ltée, pendant une durée de sept (7) ans, après les derniers travaux de remise en culture. À cet égard, au plus tard trois (3) mois après les derniers travaux de remise en culture, la demanderesse devra transmettre à la Commission le nom et les coordonnées de la personne agissant à titre d'agent de liaison en vue de faire respecter cette condition, pendant ces sept (7) années;

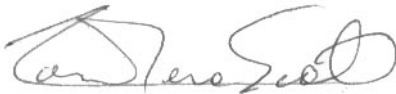
6. La demanderesse ne pourra débiter les travaux d'aménagement du terrain et de construction du pipeline à l'intérieur d'une distance de 3 kilomètre des limites du territoire de la municipalité de Lévis, et de 6 kilomètres des limites du territoire de Saint-Marc-sur-Richelieu, Saint-Charles-sur-Richelieu et Saint-Mathieu-de-Beloeil, tant que le pipeline n'aura pas été autorisé sur le territoire de ces municipalités.



Guy Lebeau, commissaire  
Président de la formation



Jacques Cartier, commissaire



M<sup>e</sup> Louis-René Scott, commissaire

/hg

p. j. Avis de recours autres que judiciaires prévus par la loi, ainsi que les délais de recours



## Food Safety for Fresh Fruits and Vegetables

Canadian fruits and vegetables have always been recognized for their high level of safety and for their positive impact on the health of consumers. Recent cases of food-borne illnesses have increased consumer awareness of the potential for contamination of produce. In order to reassure buyers, maintain a high level of consumer confidence and remain competitive in an international marketplace, Canadian suppliers of fresh produce must ensure their operations are meeting food safety standards.

### About the CanadaGAP Program

CanadaGAP® is a national, voluntary food safety program consisting of standards and a certification system for the safe production, handling and brokerage of fresh fruits and vegetables. Two manuals, one specific to greenhouse operations, the second for other fruit and vegetable operations, have been developed by the horticultural industry and reviewed for technical soundness by Canadian government officials. The manuals are designed for companies implementing Good Agricultural Practices (GAPs) in their fruit and vegetable production, packing and storage operations, and for repackers and wholesalers implementing Good Manufacturing Practices (GMPs) and HACCP programs. The program is also designed for fresh produce brokers implementing best practices in supplier management and product traceability.

### About Us

CanadaGAP (Good Agricultural Practices) is an industry-led food safety program for fresh fruits and vegetables. The program is operated by a not-for-profit corporation called CanAgPlus, founded by the Canadian Horticultural Council and the Canadian Produce Marketing Association.

*CanadaGAP® is a program developed in Canada to promote Good Agricultural Practices (GAPs) for fruit and vegetable suppliers.*

### CanadaGAP Program Certification

CanadaGAP certification is available to fresh fruit and vegetable suppliers who need to demonstrate to their customers that they are following the CanadaGAP manuals. Program participants are required to pass a third party audit specifically based on the manuals. Auditing and certification is outsourced to separate, internationally-accredited Certification Bodies, who are responsible for review of the audit results and certification decisions.

### International Benchmarking

CanadaGAP certification options B, C and D are formally recognized by the Global Food Safety Initiative (GFSI). CanadaGAP-certified companies have the benefit of using a made-in-Canada program to meet the food safety requirements of the international marketplace.

### Contact Us

CanadaGAP Program  
245 Menten Place, Suite 312  
Ottawa, ON K2H 9E8  
Tel: 613-829-4711  
Fax: 613-829-9379  
info@canadagap.ca  
www.canadagap.ca

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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 1<sup>st</sup> to October 15<sup>th</sup>
- 3) Added wording in Paragraph (a), Page 1 to cover payment if 2<sup>nd</sup> 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 22<sup>nd</sup> day of February, 2016.

Signed on behalf of Union

Mervyn R. Weishar  
Senior Land Specialist  
Lands Department

Signed on behalf of GAPLO

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 31<sup>st</sup> 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 1<sup>st</sup> to October 15<sup>th</sup> 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.

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)

	ACRES	RATE	TOTAL
( ) 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			<u>\$0.00</u>

Note: \* minimum payment based on a 0.5 acre site

Initialled to indicate acceptance by Owner(s):	<div></div>	<div></div>
Initialled to indicate approval by Union Gas Limited:	<div></div>	<div></div>

REPLACEMENT DIG (access likely to be stripped)

	ACRES	RATE	TOTAL
( ) 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			<u>\$15,767.20</u>

Note: \* minimum payment based on a 0.5 acre site

Initialled to indicate acceptance by Owner(s):	<div></div>	<div></div>
Initialled to indicate approval by Union Gas Limited:	<div></div>	<div></div>

ACTIVITIES IN WET SOILS / LATE OR EARLY ACTIVITIES

( ) See Addendum B-2.

GORED AREAS AND EXTRA HEADLAND AREAS

	ACRES	RATE	TOTAL
( ) 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

	ACRES	RATE	TOTAL
( ) Crop Damages	0.00	\$960.00	\$0.00
( ) Disturbance Damages	0.00	\$5,880.00	\$0.00
SUB-TOTAL 3			<u>\$0.00</u>

Initialled to indicate acceptance by Owner(s):	<div></div>	<div></div>
Initialled to indicate approval by Union Gas Limited:	<div></div>	<div></div>

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 )			<u>\$15,767.20</u>
-----------------------------	--	--	--------------------

Initialled to indicate acceptance by Owner(s):	<div></div>
Initialled to indicate approval by Union Gas Limited:	<div></div>

1 Per acre compensation as provided in this Addendum B-1 has been calculated in accordance with compensation values set out in Addend C-1 and C-2

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)

	ACRES	RATE	TOTAL
( ) 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			\$7,883.60

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)

	ACRES	RATE	TOTAL
( ) 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			\$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:

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	\$13,500.00	\$0.00	\$6,750.00
	100% land value	100% land value	0% land value	50% land value
DISTURBANCE DAMAGE	\$2,940.00	\$5,880.00	\$0.00	\$1,470.00
	50% of Disturbance value	100% of Disturbance value	0% of Disturbance value	25% of Disturbance value
ONE TIME CROP LOSS	\$9,673.76	\$19,347.51	\$0.00	\$960.00
	50% of One Time Crop Loss	100% of One Time Crop Loss	0% of One Time Crop Loss	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

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 <sup>(1)</sup>
 Allowance for additional fertilizer	 \$300.00
Stonepicking	\$200.00
 <b>TOTAL ONE-TIME CROP LOSS PAYMENT PER ACRE</b>	 <b><u>\$19,347.51</u></b>

(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) =	<b>\$960.00</b>
 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 InconvenienceSigning Bonus & Gratuitous payment @ 2 x Average Annual Crop Revenue	 <u>\$1,920.00</u>
 <b>TOTAL "DISTURBANCE" PAYMENT PER ACRE =</b>	 <b><u>\$5,880.00</u></b>

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	\$0.00	\$0.00	\$0.00
	0% land value	0% land value	0% land value	0% land value
DISTURBANCE DAMAGE				
	\$1,470.00	\$2,940.00	\$3,675.00	\$735.00
	25% of Disturbance Damages	50% of Disturbance Damages	62.5% of Disturbance Damages	12.5% of Disturbance Damages
ONE TIME CROP LOSS				
	\$4,836.88	\$9,673.76	\$12,092.20	\$480.00
(1)	25% of One Time Crop Loss	50% of One Time Crop Loss	62.5% of One Time Crop	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. 3



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	\$0.00	\$0.00	\$0.00
	0% land value	0% land value		0% land value
DISTURBANCE DAMAGE				
	\$1,470.00	\$2,940.00	\$0.00	\$735.00
	25% of Disturbance Damages	50% of Disturbance Damages		12.5% of Disturbance Damages
ONE TIME CROP LOSS				
	\$4,836.88	\$9,673.76	\$0.00	\$480.00
(1)	25% of One Time Crop Loss	50% of One Time Crop Loss		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. 3

**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 1<sup>st</sup> to October 15<sup>th</sup>) 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 15<sup>th</sup> 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.