



ONTARIO ENERGY BOARD

OEB STAFF SUBMISSION

February 21, 2017

Union Gas Limited

2017 STORAGE ENHANCEMENT PROJECT

EB-2016-0322

INTRODUCTION

Union Gas Limited (Union) applied on November 4, 2016 to the Ontario Energy Board (OEB) for approvals which would allow Union to increase capacity and deliverability of two natural gas designated storage pools located in the Township of Dawn-Euphemia in Lambton County (2017 Storage Enhancement Project or the 2017 Project). The following requests are components of the 2017 Enhancement Project approvals:

- a vary order request to allow Union to increase the operating pressures in its Dawn 156 natural gas storage pool above the current operating pressure approved by the OEB in the EB-2007-0633 proceeding (delta pressure)¹
- a favourable report to the Ministry of Natural Resources and Forestry (MNRF) pursuant to section 40(1) of the *Ontario Energy Board Act, 1998* (OEB Act) for licences to: drill three injection/withdrawal (I/W) wells in the Dawn 156 pool and one I/W well in the Bentpath pool; to deepen and convert an observation well to an I/W well; and to deepen three I/W wells in the Bentpath pool (new and enhanced wells)
- leave to construct a 600 metre, 12 inch nominal diameter pipeline within the Dawn 156 and the Bentpath pools, pursuant to section 90 of the OEB Act (pipelines to connect wells to Union's system)

¹ According to section 7.6.3 of the CSA Z341.1-14 "Storage of Hydrocarbons in Underground Formations" delta pressure is defined as the maximum operating pressure of the storage zone above the discovery pressure of the reservoir.

OEB staff supports Union's application subject to the proposed draft conditions of approval for wells licences and pipeline leave to construct attached as Appendices A and B.

PROCESS AND STRUCTURE OF SUBMISSION

The application was filed on November 4, 2016. However, it was initially deemed incomplete because a letter from the MNRF referring the well drilling applications to the OEB (referral letter) was not received. On December 1, 2016 the OEB received a referral letter from the MNRF. The OEB issued a Notice of Application on December 15, 2016 which was served and published as directed.

Enbridge Gas Distribution Inc., the MNRF and Hydro One Networks Inc. are registered intervenors in the proceeding. The OEB proceeded by way of a written hearing. In accordance with Procedural Order No. 1 issued on January 10, 2017, the interrogatory phase was completed on February 7, 2017.

Union requires approval for all components of the 2017 Storage Enhancement Project in order to increase storage capacity and deliverability to meet the need for market-based storage services.

In the context of the project as a whole, the OEB staff submission will address the following issues relevant to all components of the 2017 Storage Enhancement Project:

- Need for the storage enhancement
- Costs and potential impact on Union's ratepayers
- Land related matters
- Environmental matters
- Indigenous consultation

Next, the submission will address the geological, engineering, operational, technical and safety aspects of Union's request to delta pressure the Dawn 156 pool and to drill new and enhanced wells in both the Dawn 156 and Bentpath pools. It is noted that, in Ontario, these aspects of storage pool development and operation are within the authority and oversight of the MNRF.²

² The authority of the MNRF is in accordance with requirements of CSA Z341.1-14 "Storage of Hydrocarbons in Underground Formations" (CSA Z341) and the *Gas and Salt Resources of Ontario*,

Lastly, pipeline design specifications and the proposed conditions of approval under section 90 of the OEB Act will be addressed, which relate only to the application for leave to construct the pipeline.

2017 STORAGE ENHANCEMENT PROJECT

Union's 2017 Storage Enhancement Project (2017 Project) is planned to be in service by September 1, 2017. The 2017 Project will result in increased capacity of the Dawn 156 pool and increased deliverability of the Dawn 156 and Bentpath pools.

The storage capacity is proposed to be increased by 49,000 103m³ (1.7 Bcf) through the delta pressuring of the Dawn 156 pool to 17.2 kPa/m (0.76 psi/ft).

The deliverability of Union's storage system is proposed to be increased by 70,000 GJ/day as a result of drilling new wells and deepening the existing wells in the Dawn 156 and Bentpath pools.

Specifically, Union plans to undertake the following work at the Dawn 156 and Bentpath pools:

The Dawn 156 pool - Union applied for licences to drilling three new I/W wells (UD.286, UD.288, UD.287). Union applied for a leave to construct approximately 285 metres and 170 metres of NPS 12 pipeline. In addition to the delta pressuring of the Dawn 156 pool and the facilities that require approval of the OEB and are the subject of this proceeding, Union plans to upgrade all wells to meet CSA Z341.1-14 requirements, replace wellheads on 18 wells, install Emergency Shutdown Valves on all I/W wells, and to abandon wells D.190 and D.223.

The Bentpath pool - Union applied for licences to deepen four wells (UB.12, UB.13, UB.1, and UB.8) and to drill one new well (UB.14). Union applied for a leave to construct approximately 230 metres of NPS 12 pipeline in the Bentpath pool. In addition to facilities that require approvals of the OEB, and are the subject of this proceeding, Union plans to install Emergency Shutdown Valves on two wells (UB.13 and UB. 14).

As part of the 2017 Project, Union proposes to abandon approximately 50 metres of NP 6 and 150 metres of NPS 8 pipeline in place.

Provincial Operating Standards (the Provincial Standards).

NEED

Union identified that the 2017 Project is needed to meet a growing market demand for increased storage capacity and deliverability in Ontario.

Union plans to sell the additional storage capacity, created by increasing the operating pressure of the Dawn 156 pool, to its storage customers at market-based prices. Union emphasized the strong interest in storage capacity and deliverability services at Dawn. Union stated that it would sell the incremental capacity at Dawn to its existing non-utility customers (storage and transportation) and new non-utility customers (marketers or LDCs).

Union stated that the deliverability increased through additional wells and deepening the existing wells in both the Dawn 156 and Bentpath pools has been sold through a long term contract to a natural gas-fired electricity generating plant - TCE Napanee.

Union indicated that all of the incremental deliverability of 70,000 GJ/day has been contracted by TCE Napanee. Union also indicated that TCE Napanee requested more deliverability service that will be unmet by the 2017 Project. According to Union, the 2017 Project is the first phase of a two-phase storage deliverability enhancement. Union described in its response to OEB staff interrogatory # 1 the method it used to select the proposed project to meet TCE Napanee's deliverability demand. Union applied a proprietary network analysis model to hydraulically model its entire system (including pipelines, storage pools, compressors, valves and other infrastructure) to determine which storage pools were the best candidates for providing incremental deliverability. This way, Union determined that the Dawn 156, Bentpath and Bickford pools were preferred for additional wells to meet the TCE Napanee deliverability demand. Union stated that the application to the OEB to increase the Bickford pool deliverability in order to meet the unmet demand from TCE Napanee will be filed in 2017. In response to OEB staff interrogatory # 2, Union explained that the two-phase approach is caused by a delay in completing 3D seismic studies to determine new well locations in the Bickford pool. Based on that, Union stated that it decided to apply for approvals related to the Dawn 156 and Bentpath pools and to delay the Bickford pool enhancement application to phase two. Union plans to complete construction of facilities for phase two in November 2018, slightly after the start of the TCE Napanee commissioning and testing, which is planned for early in 2018.

Union stated that according to its contract terms with TCE Napanee, Union is responsible for bridging the partial gap between contract start and a two-phase storage enhancement completion, if required.

OEB staff notes that Union did not provide clear information on the record regarding TCE Napanee as a customer. It would have been helpful if Union had provided a high level description of the location, capacity and other non-proprietary information about the customer to assist in understanding the demand and the need for the increased deliverability. OEB staff submits that in future applications of this nature, even if the storage services will be sold through a market-based process, it would be helpful if Union provides a more complete context for the need for the storage enhancement. In addition, OEB staff notes that the implications of Union's two phased approach from a business, economic, environmental, technical and operational perspective was not described, nor were details of any efficiencies that may have been gained in meeting all of the need at once from an approval, cost, environmental or construction perspective. Further explanation of the rationale and implications of Union's approach would have been of assistance.

COST AND POTENTIAL IMPACT ON UNION'S RATEPAYERS

Union did not provide an economic feasibility analysis for the 2017 Project as both capacity based services and deliverability services will be sold at market-based prices and the costs will not be recovered from Union's ratepayers.

OEB staff notes that since the Natural Gas Electricity Interface Review (NGEIR) EB-2005-0551 Decision, Union has not been required to file cost or economic information for unregulated storage projects such as the 2017 Storage Enhancement.

OEB staff submits that because the increased storage capacity and deliverability of the Dawn 156 and Bentpath pools will serve Union's unregulated storage business, there will be no impact on Union's ratepayers.

OEB staff has no concerns with the cost or impact on Union's rate-payers given that the services resulting from the 2017 Project will be sold by Union at market-based prices and are therefore not subject to OEB regulation.

LAND MATTERS

Union applied for approval under section 90 of the OEB Act to construct a 600 metre, 12 inch nominal diameter pipeline within the Dawn 156 and the Bentpath pools.

Section 97 of the OEB Act stipulates that an approval under section 90 cannot be granted until the OEB is satisfied that an applicant has offered or will offer to each owner of land affected by the approved route or location an agreement in a form approved by the OEB.

Union noted that the drilling of all wells, construction of pipelines and roadways will be in accordance with the existing Storage Lease Agreements within the two storage pools. Union stated that although the existing Storage Lease Agreements allow Union to construct gathering pipelines, it will offer directly affected landowners a new Pipeline Easement. Union filed an updated form of Easement Agreement, which was previously approved by the OEB in the EB-2014-0261 proceeding and was amended to include new requirements under CSA Z662-15 “Oil and Gas Pipelines Systems” (CSA Z662-15) with respect to the prohibition of storage of a flammable material, solid or liquid spoil, refuse waste or effluent on the easement.

Union explained that the easement agreements will not be registered with the local land registry office until the Reference Plans have been completed, which will show the exact location of the pipeline facilities. Union proposes to complete the Reference Plans after the pipelines have been constructed.

All of the six directly affected landowners have signed a Letter of Acknowledgement agreeing to the location of the facilities and stating they have no objection to commencement of drilling the wells, constructing the pipelines, and constructing the permanent all-weather access roadways. OEB staff notes that the second sentence in the final paragraph of the Letter of Acknowledgment appears to have a typographical error. OEB staff believes the statement should say “We have no objections...” rather than “We have no objectives...”. OEB staff suggests that Union comment on how it will address this issue in its reply submission.

OEB staff submits that there are no outstanding land-related concerns arising from the 2017 Project. OEB staff submits that the Form of Agreement should be approved as it is consistent with the form of agreement previously approved by the OEB and with current requirements of CSA Z662-15 for storing flammable materials and solid and effluent waste in the easement.

ENVIRONMENTAL MATTERS

The Environmental Protection Plan (EPP) for the 2017 Project has been completed to meet the intent of the OEB's "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines in Ontario*" (2016) (OEB Environmental Guidelines).

The EPP which covers all facilities in the 2017 Storage Enhancement Project, including wells and pipelines, was submitted to the Ontario Pipeline Coordinating Committee (OPCC) for a review on October 25, 2016. There are no outstanding matters or concerns raised in the OPCC review.

Union has committed to conducting an environmental inspection program to ensure the implementation of all the recommendations in the EPP, any commitments made during the regulatory proceeding, and conditions of approval for both the well drilling and pipeline construction.

Jake and Mary Smit, landowners in the Dawn 156 pool (landowners) filed a letter of comment with the OEB, dated January 5, 2017 expressing concerns related to the following: the gas content and water quality in the water well on their property, and the testing and monitoring of water quality in this water well; noise levels resulting from operation of the "156 station"; fire and safety hazards related to operation of the station; and a lack of communication initiated by Union.

On January 12, 2017, Union met with the landowners to discuss their concerns. Union followed up with a letter to the landowners dated January 18, 2017. This letter was filed with the OEB. In the letter Union described its water well monitoring program, which includes the landowners' water well, and which was scheduled to start in January 2017. Union explained that the Dawn 156 Compressor Station site, as well as each well head in the Dawn 156 pool, have remote controlled automatic shut off valves in the event of an emergency. Union also noted that it has a Safety Plan established with the Township of Dawn-Euphemia and the Dawn- Euphemia Fire Department in case of an emergency. Regarding the noise complaint from the operation of the Dawn 156 Compressor, Union stated that no significant noise increase is anticipated and that in fact, in the future, the noise will be reduced because the compressor will be used less due to the design of the 2017 Project.

As a next step, in addressing the landowners concerns about water quality and in

response to OEB staff interrogatory # 8, Union filed a letter by Stantec Consulting Ltd. (Stantec) to Jake and Mary Smit, dated January 26, 2017. Stantec visited the landowners' residence on January 18, 2017 to document their concerns regarding the water well and to take samples. Stantec indicated that the results of water testing are pending and will be available to the landowners. This letter also provided contact information for Union's Land Agent for any further enquiries by the landowners.

OEB staff's view is that Union has appropriately responded to the concerns raised by the landowners and expects Union to file with the OEB the water quality test results for the private water well on Jake and Mary Smit's property.

OEB staff submits that Union followed the requirements of the OEB Environmental Guidelines and that Union's compliance with the proposed conditions of approval in Appendix A and Appendix B will ensure that impacts of well drilling and pipeline construction are mitigated and monitored.

INDIGENOUS CONSULTATION

The following First Nations and Métis were notified about the project on May 9, 2016 via email:

- Chief Leslee White-eye and Roland Elijah, Consultation Manager of the Chippewa of the Thames First Nation
- Chief Louise Hillier of Caldwell First Nation
- Chief Chris Plain and Sharilyn Johnston, Environmental Coordinator of Aamjiwnaang First Nation
- Chief Dan Miskokomon, Dean Jacobs and Jared Macbeth, Consultation Manager of Walpole Island First Nation
- Chief Tom Bressette and Lorraine George, Consultation Manager of Kettle and Stoney Point First Nation

In addition, the following discussions took place:

- Meeting between the Aamjiwnaang First Nations Environmental Committee and Union's Manager of First Nations, Manager Underground Storage and the Principal Reservoir Engineer on July 5, 2016. The Committee requested a copy of the Risk Analysis Report and an updated presentation on Union's Emergency procedures. Union provided the Aamjiwnaang First Nations with a copy of the Risk Analysis

Report and is making arrangements for a presentation on Union's Emergency procedures. No issues or concerns were raised and Union has committed to ongoing communication during the project.

- Meeting between Fallon Burch, Consultation Manager for the Chippewa's of the Thames First Nation and Union's Manager of Indigenous Affairs, Manager of Underground Storage and the Principle Reservoir Engineer on October 6, 2016 to discuss any potential impacts. No issues arose following an initial discussion on the work to be completed and Union has committed to ongoing communication during the project.
- Phone call with Jared Macbeth, Project Review Coordinator for Walpole Island First Nation on May 17, 2016 to explain the project. No issues were raised but a formal consultation was requested. On November 9, 2016 and December 8, 2016 Union spoke of this project while meeting with Mr. Macbeth on other business. He raised no issues or concerns, but a future meeting date was set. Union met with Mr. Macbeth and Dean Jacobs, Consultation Manger on February 2, 2017. Communications will continue for the duration of the project.
- Phone call with Chief Hillier of the Caldwell First Nation on October 26, 2016. No issues were raised but Union agreed to a formal meeting with the Manager of Indigenous Affairs, Manager of Underground Storage and the Principle Reservoir Engineer to discuss the project. She asked that if Archeology or Environmental monitors are required that Union go directly to her to start arrangements. Union agreed. Union will arrange further consultation as per Chief Hillier's schedule and will continue to communicate for the duration of the project.
- Phone call with Lorraine George, CAO of the Kettle and Stony Point First Nation on June 30, 2016. Union spoke of the project and she had no concerns based on its previous projects. Ms. George requested that Union contact Diane Thomas in the Lands Management department when/if monitors are required for the work. Union agreed. Ms. George agreed to contact Union when the First Nation has a new Land Manager was in place. Union will follow up early February if no response from Ms. George has been received up to that point.

On December 21, 2016, as directed by the OEB, Union provided an affidavit of service confirming that the Notice of Application and the proceeding had been served on all Aboriginal communities that were consulted or with lands or interest in

the lands directly affected by the proposed 2017 Storage Enhancement Project and to the Métis Nations of Ontario, Lands, Resources and Consultation Office in Toronto.

To date, no issues have been brought forward regarding the project. Due to the location and specifics of the project, Union is not expecting any issues to be brought forward in the future by the First Nations or Métis.

During construction, Union has committed to having inspectors in the field who will be available as a primary contact for First Nations and Métis communities to discuss and review any issues that may arise during construction.

When Union completes the necessary archaeological assessments for the project, Union has committed to consulting with and providing the results of the surveys to any First Nations or Métis upon their request.

Union has also stated its commitment to following up and continue its existing approach to consultation.

OEB staff submits that Union has complied with the intent of the OEB Environmental Guidelines regarding Indigenous consultation. It appears that as of the date of this submission, Union has adequately addressed the requirement for adequate consultation with Indigenous communities.

DELTA PRESSURING DAWN 156 POOL

In this application, Union requested that the original condition of approval in OEB order EB-2007-0633 related to the operating pressures be replaced by the following condition for the Dawn 156 pool:

Union Gas Limited shall not operate the storage pool above a pressure representing a pressure gradient of 17.2 kPa/m (0.76 psi/f) of depth without leave of the Board. Union Gas Limited shall provide summaries of an engineering study and geological study in support of any leave application and a formal confirmation from the Ministry of Natural Resources and Forestry that operating the pool at the increased operating pressure complies with the requirements of the CSA Z341 standard.

Union filed an application with the OEB to vary a condition related to the maximum operating pressure of the Dawn 156 pool. Union asked that it be allowed to increase the operating pressure to a pressure that corresponds to a pressure gradient of 17.2 kPa/m (0.76 psi/ft). Operation under this pressure should comply with the relevant requirements of the CSA Z341.1-14. In accordance with the requirements of the CSA Z341.1-14 and related to the vary order application, Union provided the MNRF with the following reports on the Dawn 156 pool for their review: (i) "What If" Analysis and Operability Issues report (ii) Assessment of Neighboring Activities (iii) Engineering Assessment (together the Dawn 156 Pool Reports).

Union stated that it understands that the MNRF will file comments on compliance with the CSA Z341.1-14 and on the Dawn 156 Pool Reports in MNRF's final submissions in this proceeding.

In the EB-2007-0633 Dawn Deliverability proceeding, Union identified that the maximum operating pressure of the Dawn 156 pool would be 8,290 kPa. This relates to a pressure gradient of 16.5 kPa/m (0.73 psi/ft). In this application, Union is proposing to increase the pressure in the Dawn 156 pool to 17.2 kPa/m (0.76 psi/ft). Union stated that this increase in pressure is consistent with past applications submitted by Union and approved by the OEB (Union's 2016 Storage Enhancement Project EB-2015-0250).

OEB staff supports Union's request subject to Union filing on the record MNRF's confirmation that it has reviewed and is satisfied with Union's compliance with the CSA Z341.1-14 and the Dawn 156 Pool Reports.

Subject to Union's filing additional documents noted above, OEB staff agrees that the original condition of approval in EB-2007-0633 be replaced with the condition wording proposed by Union.

WELL LICENCES APPLICATIONS

Union applied to the OEB for licences allowing it to drill 3 Injection/Withdrawal (I/W) wells in the Dawn 156 pool, to drill one I/W well in the Bentpath pool, to deepen and convert one observation well in the Bentpath pool, and to deepen three I/W wells in the Bentpath pool. Temporary drilling pads were constructed in the fall of 2016. The drilling pads are 60 m x 80 m. The topsoil was removed and stock piled prior to construction of

the pads. When drilling is completed, the stored topsoil will be re-distributed to the landowners' satisfaction. Regarding the abandonment of wells Dawn 190 and Dawn 223 in the Dawn 156 pool Union confirmed they will be abandoned in accordance with CSA Z341.1-14 and the OGSRA Provincial Operating Standards (Version 2.0).

The MNRF is the provincial authority that ensures all of the relevant requirements of the CSA Z341.1-14 for drilling, modifications, and operation of these wells is satisfied. Union stated that it filed all necessary studies with the MNRF for a review and it expects final comments and a statement on compliance with the CSA Z341.1-14 from the MNRF will be provided in MNRF's final submission in this proceeding.

Union met with the MNRF on August 10, 2016 to discuss the 2017 Project and provide copies of the engineering reports which were prepared for the 2017 Project. An updated presentation was provided to the MNRF in October 2016.

The studies completed and filed with the MNRF for the Dawn 156 pool are:

- A "What If" Analysis of Hazards and Operability Issues Report (HAZOP);
- An Assessment of Neighboring Activities;
- An Engineering Assessment for the Dawn 156 Pool

The studies completed and filed with the MNRF for the Bentpath pool are:

- A "What if" Analysis of Hazards and Operability Issues Report (HAZOP)
- An Assessment of Neighboring Activities

Union submitted that an Engineering Assessment is not required for the proposed well drilling in the Bentpath pool since the pressure in the pool is not changing. An Engineering Assessment for the Bentpath pool was, however, completed by Geofirma and provided to the MNRF as part of the EB-2012-0391 proceeding. The Engineering Assessment was not updated as part of this filing.

These studies filed with the MNRF for its review confirm that the Dawn 156 pool can be operated safely at the increased pressure and support the enhancement of the deliverability at both the Dawn 156 and Bentpath pools.

OEB staff supports Union's well licence applications subject to Union placing on the record that it complied with all the applicable regulatory requirements to the satisfaction of the MNRF. OEB staff proposed conditions of approval relate to the authority to issue the licence and the term of the drilling licence, certain construction requirements, monitoring and reporting of any mitigation for construction impacts, and a requirement that Union should conform to the CSA Z341 standards to the satisfaction of the MNRF. In response to OEB staff interrogatory #11, Union accepted all of the proposed conditions. By way of this submission, OEB staff proposes removing conditions # 9 and # 10 to make it clear that the entity responsible for the compliance with the conditions is Union and that all communication with regard to the conditions is filed with the OEB, rather than the OEB's designated representative. This approach is consistent with the approach the OEB takes in its standard conditions for leave to construct. The amended proposed conditions are attached to Appendix A of the submission.

OEB staff submits that a favourable OEB Report, under subsection 40(1) of the Act, be provided to the MNRF to whom Union has applied for licences to drill wells in the Dawn 156 and Bentpath pools, subject to the proposed conditions of approval attached as Appendix A of this submission and a satisfactory review of Union's compliance with all CSA Z341.1-14 and other applicable regulatory requirements to the satisfaction of the MNRF.

LEAVE TO CONSTRUCT

The proposed pipelines are designed to transport the expected flows to and from the new wells. These pipelines are planned to be constructed during the spring and summer of 2017 using the existing access road network.

Design and pipe specifications for the proposed storage gathering pipelines are outlined in Union's evidence. Union noted that all the design specifications are in accordance with the Ontario Regulation 210/01 for Oil and Gas Pipeline Systems.

Union is proposing to abandon two wells as part of this 2017 Project. Approximately 50 metres of NPS 6 and 150 metres of NPS 8 gathering lines to these wells are planned to be abandoned in place. Union stated that these pipelines will be abandoned following the Technical Standards and Safety Authority Abandonment Guidelines which are filed on the record.

While the specific pipeline facilities in this application do not meet a class 2 location, there are areas within the storage pools that do meet the class 2 location requirements.³ Union proposes to design all pipelines to a class 2 location in anticipation of future growth, and to keep the class location consistent throughout the pools.

OEB staff supports Union's application for leave to construct the pipelines to connect the wells to Union's system, subject to the proposed conditions of approval attached as Appendix B to this document. Union agreed with the conditions proposed in OEB staff interrogatory # 12. By way of this submission, OEB staff proposes removing condition # 5, which calls for Union's reporting on actual project costs, as the costs of the 2017 Storage Enhancement Project are not shared by Union's ratepayers.

All of which is respectfully submitted.

³ Class location requirements for pipeline design are set in CSA Z662-15 "Oil and Gas Pipeline Systems"

Appendix A

to

OEB Staff Submission

**Draft Conditions of
Approval**

Well Licences

Union Gas Limited
EB-2016-0322
OEB Staff Proposed Conditions of Approval
Well Drilling

1. Union Gas Limited (Union) shall rely on the evidence filed with the OEB in EB-2016-0322 proceeding and comply with applicable laws, regulations and codes pertaining to the construction of the proposed wells.
2. Authorization for the issuance of the drilling licence is limited to twelve months from the date of the OEB's Report to the Ministry of Natural Resources and Forestry.
3. The authority granted under this Order to Union is not transferable to another party without leave of the OEB. For the purpose of this condition another party is any party except Union Gas Limited.
4. Union shall construct the facilities and restore the land in accordance with its Application and evidence given to the OEB, except as modified by this Order and these Conditions of Approval.
5. Union shall ensure that the movement of equipment is carried out in compliance with all procedures filed with the OEB, and as follows:
 - i) Union shall make reasonable efforts to keep the affected landowner as well as adjacent landowners and their respective tenant farmers, or their designated representatives, informed of its plans and construction activities; and
 - ii) the installation of facilities and construction shall be coordinated so as to minimize disruption of agricultural land and agricultural activities.
6. Union shall, subject to the recommendation by an independent tile contractor and subject to the landowners approval, construct upstream and downstream drainage headers adjacent to the drilling area and access roads that cross existing systematic drainage tiles, prior to the delivery of heavy equipment, so that continual drainage will be maintained.

7. Both during and after construction, Union shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:
- a) a post construction report, within three months of the in-service date, which shall:
 - i. provide a certification, by a senior executive of the company, of Union's adherence to Condition 1.1;
 - ii. describe any impacts and outstanding concerns identified during construction;
 - iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;
 - iv. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions; and
 - v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.
 - b) a final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:
 - i. provide a certification, by a senior executive of the company, of Union's adherence to Condition 1.1;
 - ii. describe the condition of any rehabilitated land;
 - iii. describe the effectiveness of any

actions taken to prevent or mitigate
any identified impacts construction;

- iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and
- v. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.

8. For the purposes of these conditions, conformity of Union with CSA Z341 shall be to the satisfaction of the Ministry of Natural Resources and Forestry.

~~9. Union shall designate one of its employees as project manager who will be responsible for the fulfillment of these conditions, and shall provide the employee's name to the Ministry of Natural Resources and Forestry, the OEB and to all appropriate landowners.~~

~~10. The OEB's designated representative for the purpose of these Conditions of Approval shall be the Manager, Supply and Infrastructure.~~

Appendix B

to

OEB Staff Submission

Draft Conditions of Approval

Leave to Construct

**Leave to Construct Conditions of Approval
Application under Section 90 of the OEB Act
Union Gas Limited
EB-2016-0322**

1. Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the Board's Decision and Order in EB-2016-0322 and these Conditions of Approval.
2. (a) Authorization for leave to construct shall terminate 12 months after the decision is issued, unless construction has commenced prior to that date.

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

5. ~~Union shall file, in the proceeding where the actual capital costs of the project are proposed to be included in rate base, a Post Construction Financial Report, which shall indicate the actual capital costs of the project and shall provide an explanation for any significant variances from the cost estimates filed in this proceeding.~~
6. Both during and after construction, Union shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:
- (a) a post construction report, within three months of the in-service date, which shall:
 - i. provide a certification, by a senior executive of the company, of Union's adherence to Condition 1;
 - ii. describe any impacts and outstanding concerns identified during construction;
 - iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;
 - iv. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions; and
 - v. provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project.
 - b) a final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:

- i. provide a certification, by a senior executive of the company, of Union's adherence to Condition 3;
- ii. describe the condition of any rehabilitated land;
- iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts construction;
- iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and
- v. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.