

September 7, 2018

BY RESS & Courier

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

Dear Ms. Walli:

**Re: Union Gas Limited (“Union”)
2017 Storage Enhancement Project
Board File # EB-2016-0322**

Pursuant to Condition 6.(a)i-v. of the Board’s Conditions of Approval, attached please find the Post Construction Report for the above noted project.

Sincerely,

[original signed by]

Shelley Bechard
Administrative Analyst, Regulatory Projects

cc: Z. Crnojacki
N. Marconi
Regulatory Library

2017 STORAGE ENHANCEMENT PROJECT

POST CONSTRUCTION REPORT

**Prepared By: Union Gas Limited
Environmental Planning
August 2018**

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1.0 INTRODUCTION

This Post Construction Report is provided in compliance with the Ontario Energy Board (“OEB”) Order EB-2016-0322 granting Union Gas Limited (“Union”) approval to allow Union to increase capacity and deliverability of the Dawn 156 and Bentpath natural gas designated storage areas located in the Township of Dawn-Euphemia in Lambton County (2017 Storage Enhancement Project or the 2017 Project). To increase the capacity and deliverability in the two storage areas, Union applied to the OEB for the following:

- An order to allow Union to increase the operating pressure in its Dawn 156 pool above the current operating pressure approved by the OEB in the EB-2007-0633 proceeding. The increase operating pressure added storage capacity to the Dawn 156 pool.
- A favourable report to the Ministry of Natural Resources and Forestry (MNRF) pursuant to section 40(1) of the 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 (the Wells). Drilling and operation of the Wells added deliverability to the Dawn 156 and the Bentpath pools.
- An order for leave to construct 600 metres of NPS (Nominal Pipe Size) 12 inch pipelines within the Dawn 156 and Bentpath pools, pursuant to section 90 of the OEB Act (the Pipelines). The Pipelines connected the Wells to Union’s integrated storage and transportation system.

The requirements for and details of this report are outlined in the specific conditions issued by the OEB in its Decision dated April 13, 2017 and as listed below. There are two separate sets of conditions issued by the OEB (Conditions of Licence – Well Drilling and Operation and Pipelines Leave to Construct – Conditions of Approval). The complete Conditions of Approval can be found in Appendix B. The Conditions of Approval addressed in this report are as follows:

Conditions of Licence – Well Drilling and Operation

Condition 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.

Condition 3

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 licence and these Conditions.

Condition 4

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.

Condition 5

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.

Condition 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, licenses, 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 adherence to Condition 1;
 - ii. describe the condition of any rehabilitated land;
 - iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction;
 - iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and
 - v. include a log of all complaints received by Union, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions.

Pipelines Leave to Construct – Conditions of Approval

Condition 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.

Condition 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.

Condition 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.

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

2.0 BACKGROUND

Union was granted approval to construct the Project on April 13, 2017. Construction was initiated on April 27, 2017 and the pipeline was placed into service on June 19, 2018 which completed construction. Cleanup and land restoration is ongoing and will be completed in fall 2018.

The proposed well drilling, pipeline installations and associated works in the Bentpath pool occurred on Lots 31-32, Concession 5, Township of Dawn-Euphemia in Lambton County. The proposed well drilling, pipeline installations and associated works in the Dawn 156 pool occurred on Lots 32-33, Concession 1, Township of Dawn-Euphemia in Lambton County. Please see Appendix A for mapping of the Project Area.

All of the work was completed in accordance with the existing Storage Lease Agreements within the Dawn 156 and the Bentpath pools. In addition to the existing Storage Lease Agreements, Union obtained from all six directly affected landowners signed Letters of Acknowledgement, in which they agreed to the location of all of the 2017 Project facilities and stated they had no objection to the commencement of drilling the Wells, construction of the pipelines, and construction of the permanent all-weather access roadways.

With regard to the pipelines, Union stated that although the existing Storage Lease Agreements allow Union to construct gathering pipelines, it offered directly affected landowners a new Form of Pipeline Easement Agreement. Union filed the Form of Pipeline Easement Agreement and noted that this form was previously approved by the OEB in the EB 2014-0261 proceeding and was amended to include the new requirements under CSA Z662-15 “Oil and Gas Pipeline Systems” with respect to the prohibitions of storage of a flammable material, solid or liquid spoil, refuse waste or effluent on the easement.

The main activities of the Project progressed as follows:

- Topsoil stripping at the locations of the proposed all-weather access roads and drilling pads
- Construction of the all-weather access roads and drilling pads
- Drilling the new I/W wells, converting an existing observation well to an I/W well and deepening the three existing I/W wells
- Connecting the new I/W wells to the existing gathering system with the installation of new NPS 12 inch pipelines

Union will return to the right-of-way in spring 2019 to perform a general overview to ensure clean-up and restoration measures were successful and all disturbed areas are stable and re-vegetated. Any areas that require additional restoration measures will be addressed as required.

3.0 POTENTIAL IMPACTS AND MITIGATION

3.1 Conditions of Licence – Well Drilling and Operation

3.1.1 Condition 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.

Union relied on the evidence filed with the OEB in EB-2016-0322 proceeding and complied with applicable laws, regulations and codes pertaining to the construction of the proposed wells.

3.1.2 Condition 3

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 licence and these Conditions.

Union constructed the facilities and restored the land in accordance with the Board's Decision and Order in EB-2016-0322 and the Conditions of Approval, including the conditions from the change requests approvals as discussed in section 3.2.3.

3.1.3 Condition 4

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*

Union's Lands Relations Agent kept the affected landowner as well as adjacent landowners and their respective tenant farmers/designated representatives informed of its plans and construction activities and was available by phone throughout the duration of construction.

- ii) the installation of facilities and construction shall be coordinated so as to minimize disruption of agricultural land and agricultural activities.*

Union coordinated the installation of facilities and construction so as to minimize disruption of agricultural land and agricultural activities by:

- Testing each impacted agricultural field for Soybean Cyst Nematodes (SCN) and implemented appropriate mitigation

measures (i.e. Clean Equipment Protocols) where required to prevent the spread of SCN to fields not impacted by SCN.

- Ensured the landowners agreed to the location of all of the 2017 Project facilities.
- Pre-construction tiling was undertaken prior to the start of construction where required.
- Disrupted or broken tile was repaired following Union's documented procedures for tile repair.
- Grading and any other work on wet soils was prohibited and wet soils shutdown practices were adhered to.
- Stripping topsoil prior to the construction of all-weather access roads, temporary drilling pads, and pipeline installations to maintain its integrity and prevent topsoil/subsoil mixing during restoration.
- Landowners and tenants were contacted before any fences were disturbed, temporary fencing was erected if requested by the landowner or tenant, and fences were replaced as soon as possible.
- Areas disrupted by drilling and pipeline construction were restored by re-grading followed by chisel ploughing and disking
- The Lands Relations Agent reviewed and discussed site restoration measures with the landowners prior to implementation to obtain any concerns or suggestions with regard to such measures.
- Upon completion, the Lands Relations Agent reviewed the areas with the landowners to ensure restoration was completed to the landowner's satisfaction.

3.1.4 Condition 5

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.

No landowner requested up and downstream headed tiles around the proposed roads and drilling pads therefore the construction of upstream and downstream drainage headers was not necessary.

3.1.5 Condition 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;*

One paper copy and one electronic (searchable PDF) version of this Post Construction Report are provided to the Board. This report is certified by Paul Rietdyk, Vice President of Engineering Construction & STO, that Union has relied on the evidence filed with the OEB in EB-2016-0322 proceeding and complied with applicable laws, regulations and codes pertaining to the construction of the proposed wells and is confirmed by the signed letter of approval found in Appendix D.

- ii. describe any impacts and outstanding concerns identified during construction;*

Table 1 summarizes the impacts identified during construction and the measures implemented to mitigate such impacts. There are no outstanding concerns as a result of construction.

- iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;*

Table 1 summarizes 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*

Union's Complaint Tracking System, which identifies the current status of complaints received as a result of pipeline construction, was in effect. A complaint is identified as a concern raised by a landowner or member of the public that has not been resolved to their satisfaction within three (3) working days.

One complaint was received from a landowner on May 16, 2018 and was resolved by May 22, 2018. Please see Appendix D for a summary of the complaint.

Union will continue to monitor the state of the land and will address any landowner or public concerns should they arise.

- v. *provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.*

Paul Rietdyk, Vice President of Engineering Construction & STO, has certified that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the project and is confirmed by the signed letter of approval in Appendix D.

Union obtained the following environmental permits for construction:

Ministry of Tourism, Culture and Sport

- Archaeology clearance under the MTCS File Number 0005671

Project Information Form Number	Stage	Location
P083-0297-2016	1 - 2	Project Area

b) a final monitoring report, no later than 15 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 adherence to Condition 3;*
- ii. describe the condition of any rehabilitated land;*
- iii. describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction;*
- iv. include the results of analyses and monitoring programs and any recommendations arising therefrom; and*
- v. include a log of all complaints received by Union Gas, 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.*

One paper copy and one electronic (searchable PDF) version of the final monitoring report will be filed with the Board no later than fifteen months after the in-service date.

3.2 Pipelines Leave to Construct – Conditions of Approval

3.2.1 Condition 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.

Union constructed the facilities and restored the land in accordance with the Board's Decision and Order in EB-2016-0322 and the Conditions of Approval, including the conditions from the change requests approvals as discussed in section 3.2.3.

3.2.2 Condition 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.

Union implemented 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. Please refer to Table 1 to confirm Union's adherence to the recommendations and mitigation measures identified in the Environmental Protection Plan.

3.2.3 Condition 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.

Union advised the Board of five (5) changes to the Board:

1. (Change Request No.1) July 7, 2017: As identified in Unions pre filed evidence Union is proposing to abandon well D-223. After the well has been abandoned Union will remove the gathering pipeline that serves the well, and remove the road access to the well. Removing the pipeline and access road will avoid any future conflicts with agricultural operations in the field. Union's original plan had been to leave the pipeline and road access in place.
2. (Change Request No. 2) September 27, 2017: Union is proposing to change the top hole location for well UB14. The surface location will be moved approximately 5 metres south from the location identified in Union's pre-filed

evidence. During the drilling of UB14 the drill bit became stuck in the wellbore approximately 290 metres below the surface. Union made a number of attempts to remove the stuck drill bit but was unsuccessful in removing the bit and has subsequently abandoned the well.

3. (Change Request No. 3) September 27, 2017: Union is proposing to delay the completion of wells D286 and D287 until the April 2018. Construction of the 600 metres of NPS 12 gathering pipeline within the Dawn 156 and Bentpath pool has also been delayed. The drilling program in the Dawn 156 pool started late and could not be completed in the scheduled timeframe. It was necessary to put the pool back in service so that it could be filled during the normal injection season. As a result well drilling was suspended when the pool pressure exceeded 800 psi and will resume in the spring of 2018 as the pressure drops below this level. Delivery timelines for suitable pipeline materials were delayed which resulted in a postponement of the installation of the gathering pipeline. The gathering pipeline installation will be completed during the fall pool stabilization and is expected to be completed by December 31, 2017. Final above grade well connections will be completed by April 2018.
4. (Change Request No. 4) September 27, 2017: In Union's pre-filed evidence it proposed to deepen well UB12 in the Bentpath pool. When UB12 was originally drilled it was not drilled to its proposed depth as a result of the drilling tools becoming stuck in the wellbore. Union had planned to remove the tools from the wellbore and further deepen the well as part of this project. In 2017 Union attempted to remove this stuck drilling tool but was unsuccessful and therefore was not able to deepen the UB12.
5. (Change Request No. 5). April 12, 2018: In Change Request 3 Union identified that the final in-service date for this Project would be April 2018. Due to additional delays the final in-service for this Project will be the summer of 2018. The drilling of the Bentpath UB14 well has been delayed. Completion of all of the

wells in the 156 Pool took longer than anticipated and the drilling of the UB14 well has not been completed as quickly as planned.

Union received approvals for the change requests on July 24, 2017 (Change Request No. 1), September 29, 2017 (Change Requests Nos. 2, 3, 4), and April 24, 2018 (Change Request No. 5).

Union's change requests and Board approvals are presented in Appendix C.

3.2.4 Condition 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;*

One paper copy and one electronic (searchable PDF) version of this Post Construction Report are provided to the Board. This report is certified by Paul Rietdyk, Vice President of Engineering Construction & STO, that Union has constructed the facilities and restored the land in accordance with the OEB's Decision and Order in EB-2016-0322 and these conditions of Approval and is confirmed by the signed letter of approval found in Appendix D.

- ii. describe any impacts and outstanding concerns identified during construction;*

Table 1 summarizes the impacts identified during construction and the measures implemented to mitigate such impacts. There are no outstanding concerns as a result of construction.

- iii. describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction;*

Table 1 summarizes 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*

Union's Complaint Tracking System, which identifies the current status of complaints received as a result of pipeline construction, was in effect. A complaint is identified as a concern raised by a landowner or member of the public that has not been resolved to their satisfaction within three (3) working days.

One complaint was received from a landowner on May 16, 2018 and was resolved by May 22, 2018. Please see Appendix D for a summary of the complaint.

Union will continue to monitor the state of the land and will address any landowner or public concerns should they arise.

Union's summary of landowner complaints are presented in Appendix D.

- v. *provide a certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.*

Paul Rietdyk, Vice President of Engineering Construction & STO, has certified that the company has obtained all other approvals, permits, licences, and certificates required to construct, operate and maintain the project and is confirmed by the signed letter of approval in Appendix D.

Please see section 3.1.5 (v) for the environmental permits obtained for the Project.

4.0 SUMMARY

This Post Construction Report has been prepared as per conditions in the Board Decision EB-2016-0322. The report provides confirmation that Union has complied with the Conditions of Approval, and provides a description of the identified impacts of construction and the actions taken to mitigate such impacts. It is anticipated that these actions will effectively eliminate any long-term impacts to the environment.

Clean-up and land restoration of the work area is ongoing and will be completed in fall 2018.

A Final Monitoring Report will be prepared to evaluate the success of the restoration measures and identify any areas that require additional restoration, if necessary.

Table 1

Potential Impacts and Mitigation Measures

Table 1: Potential Impacts and Mitigation Measures

Issue	Potential Impact	Mitigation Measure
Location of facilities	Ancillary facilities such as wellheads and access roads may be an inconvenience to landowners and farming operations.	<ul style="list-style-type: none">- Prior to any activity associated with the development, the Lands Relations Agent met with the directly affected landowners and reviewed items such as the drilling schedule, as well as the location of the wellheads. Pipelines and permanent access roads.- The facilities were located so as to minimize any inconvenience to the farming operations and as agreed to by the landowners.
Surveying	Surveying may be disruptive to the landowners.	<ul style="list-style-type: none">- The landowners were notified of the intent to enter their properties.
Access Roads	Vehicular traffic during and after drilling and pipeline installation (i.e. well operations and maintenance vehicles) may cause soil rutting, compaction or mixing, particularly if soils are wet.	<ul style="list-style-type: none">- The locations of the access roads were reviewed with the landowners. Roads were constructed in such a way to minimize disruption to farm operations.- Existing laneways were utilized where possible.- Access roads and granular work areas were limited in size to the greatest extent possible.- All traffic was limited to the access roads or granular work areas to the greatest extent possible.- Culverts were used in the construction of access roads to ensure existing drainage patterns were maintained where required.- Geotextile fabric was used for access roads and work areas to provide additional stability, minimize compaction and eliminate soil mixing with granular material.
Grading	Grading was necessary for the construction of access roads, drilling pads and pipeline work areas. On Agricultural land, grading	<ul style="list-style-type: none">- Pre-construction tiling was undertaken prior to the start of any drilling operations, if necessary.- Disrupted or broken tile was repaired following the Company's documented

Table 1: Potential Impacts and Mitigation Measures

Issue	Potential Impact	Mitigation Measure
	has the potential to impact soil productivity by disrupting tile drains and causing soil mixing, rutting and compaction, particularly during wet soil conditions.	<ul style="list-style-type: none">- procedures for tile repair.- Grading was not conducted on wet soils and wet soils shutdown practices were adhered to.- In drilling and pipeline work areas where land would be returned to its former use (agricultural), topsoil was stripped and stockpiled along the edges of the work area following documented Company procedures.- An Environmental Inspector was onsite at a regular basis to observe operations such as topsoil stripping, trenching, dewatering and any other procedures that may have had an impact on the environment.
Noise	Noise from the drilling rig, pipeline equipment and/or service vehicles may disrupt nearby residents.	<ul style="list-style-type: none">- Noise was controlled to the greatest extent possible to minimize the disruption to nearby residents.- All equipment was properly muffled.
Site Restoration	Improper site restoration may have permanently affected soil productivity.	<ul style="list-style-type: none">- Areas disrupted by drilling and pipeline construction were restored by re-grading followed by chisel ploughing and disking.- The Lands Relations Agent reviewed and discussed site restoration measures with the landowners prior to implementation to obtain any concerns or suggestions with regard to the proposed measures.
Fuel Storage and Handling	Improper fuel storage and handling may have caused spilling and possible soil contamination.	<ul style="list-style-type: none">- Fuel was not stored near watercourses (i.e. within 50 m).- Fuel storage areas were clearly marked.- Containment dykes and protective plastic ground matting were used in fuel storage areas to protect against spillage and leakage.- Spill clean-up materials were stored onsite and were available in the event of a spill. If necessary, spills or leaks

Table 1: Potential Impacts and Mitigation Measures		
Issue	Potential Impact	Mitigation Measure
		were to be reported to the appropriate authority immediately (Ministry of Environment and Climate Change Spills Action Centre at 1-800-268-6060).
Liquid and Solid Waste	Drilling fluids, solid wastes and lubricants must be properly handled, stored and disposed of to avoid the possible contamination of surrounding soil or water.	<ul style="list-style-type: none"> - Liquid and solid wastes were properly stored, handled and disposed of in an approved location. - Drilling fluids were properly contained in waste tanks and disposed of after drilling in an appropriate location. - The level of drilling fluids was frequently monitored to avoid possible overflows of the tanks.
Landowner Concerns	Disruption to landowners and tenants.	<ul style="list-style-type: none"> - Union provided the landowners and tenants with the telephone numbers of Company personnel. - A Landowner Relations Program was established to track complaints during construction.
Roadside Ditches	Water quality concerns.	<ul style="list-style-type: none"> - Ditches were returned to pre-construction conditions or better as quickly as possible.
Nuisance Dust	Disturbance to landowners and tenants.	<ul style="list-style-type: none"> - Dust was controlled as required.
Fences	<p>Disruption to landowners and tenants.</p> <p>Loss of control of animals inside fenced areas.</p>	<ul style="list-style-type: none"> - Landowners and tenants were contacted before any fences were disturbed. - Temporary fencing was erected if requested by the landowners or tenants. - Fences were replaced as soon as possible.
Underground Utilities	Disruption of services.	<ul style="list-style-type: none"> - Locates were obtained from all utilities. - Any damages to utilities were repaired as soon as possible.

Table 1: Potential Impacts and Mitigation Measures

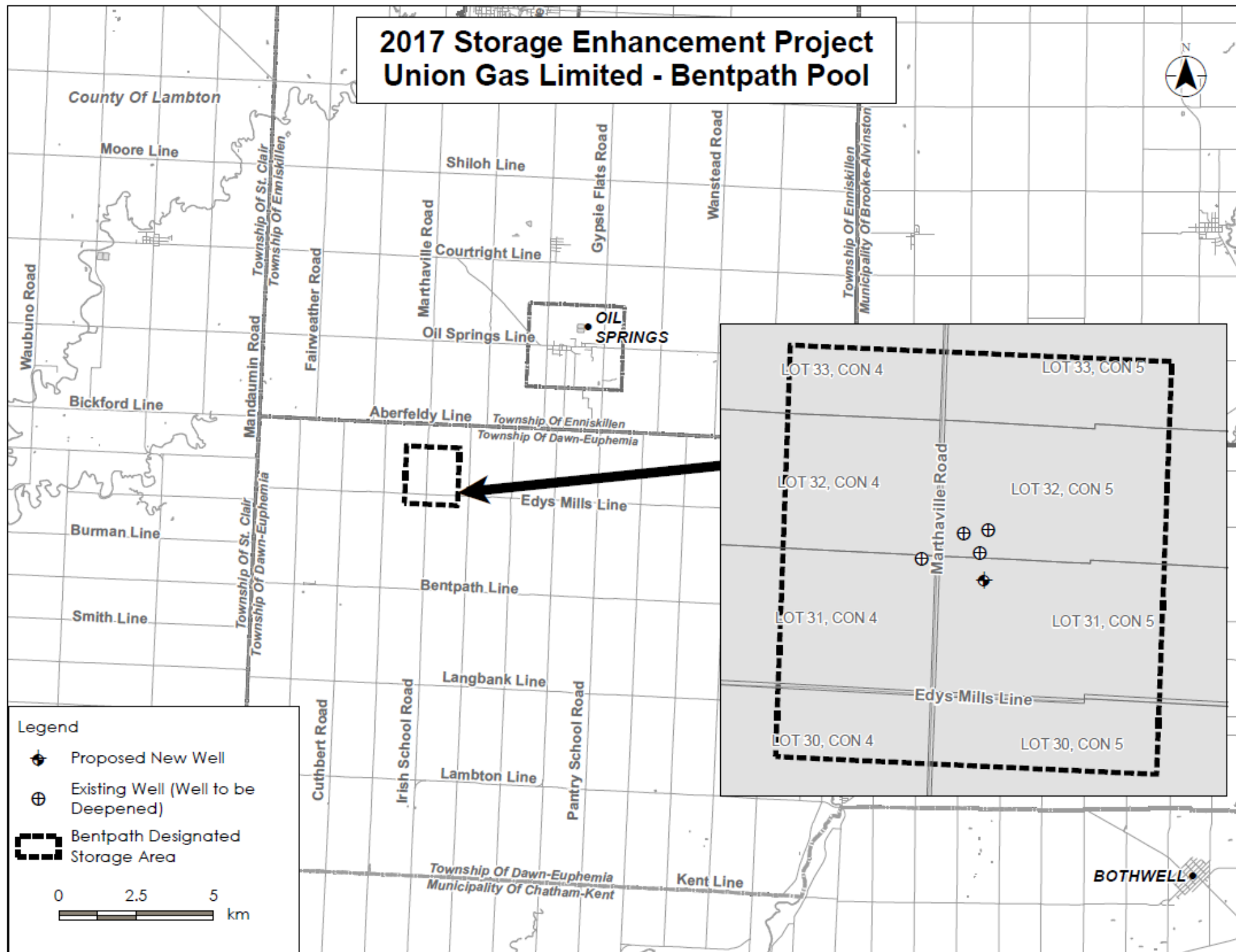
Issue	Potential Impact	Mitigation Measure
Archaeology, Cultural Heritage Landscapes and Built Heritage Resources	Disturbance of heritage resources.	<ul style="list-style-type: none">- An Archaeological Assessment was completed prior to construction.- Direction was given to stop construction if artifact were encountered and to notify the Ministry of Tourism, Culture and Sport.- A Cultural Heritage consultant was retained to determine if impacts to cultural heritage landscapes and/or built heritage resources were anticipated and to develop a mitigation plan if required.
Water Wells	Disruption to water supply.	<ul style="list-style-type: none">- If water quality/quantity concerns occurred as a result of construction activities, the Company would supply potable water until the situation was corrected.- Union implemented its standard well monitoring program.
Trees	Damage to trees and disturbance to wildlife.	<ul style="list-style-type: none">- Minimal tree removal occurred.- Trees were removed outside of the avian nesting window.- Restoration plans were discussed with the landowners if required.
Natural Areas	Sedimentation run-off.	<ul style="list-style-type: none">- Sediment barriers such as straw bales/sediment fencing were used where there was potential for runoff.
Vegetative cover	Loss of vegetative cover leading to soil erosion.	<ul style="list-style-type: none">- Cover was restored by means of seeding or hydro-seeding as soon as possible.
Soils: Erosion	Introduction of sediment/silt to adjacent lands.	<ul style="list-style-type: none">- Disturbed soils were restored as soon as possible after construction.
Contaminated Soils	Dealing with contaminated materials. Public safety issue.	<ul style="list-style-type: none">- No contaminated soils were anticipated, however; if suspect soils were uncovered, direction was provided to stop work immediately, contact the Union Environmental Department, and clean up

Table 1: Potential Impacts and Mitigation Measures		
Issue	Potential Impact	Mitigation Measure
		contaminated material following Company and Ministry of the Environment and Climate Change procedures.

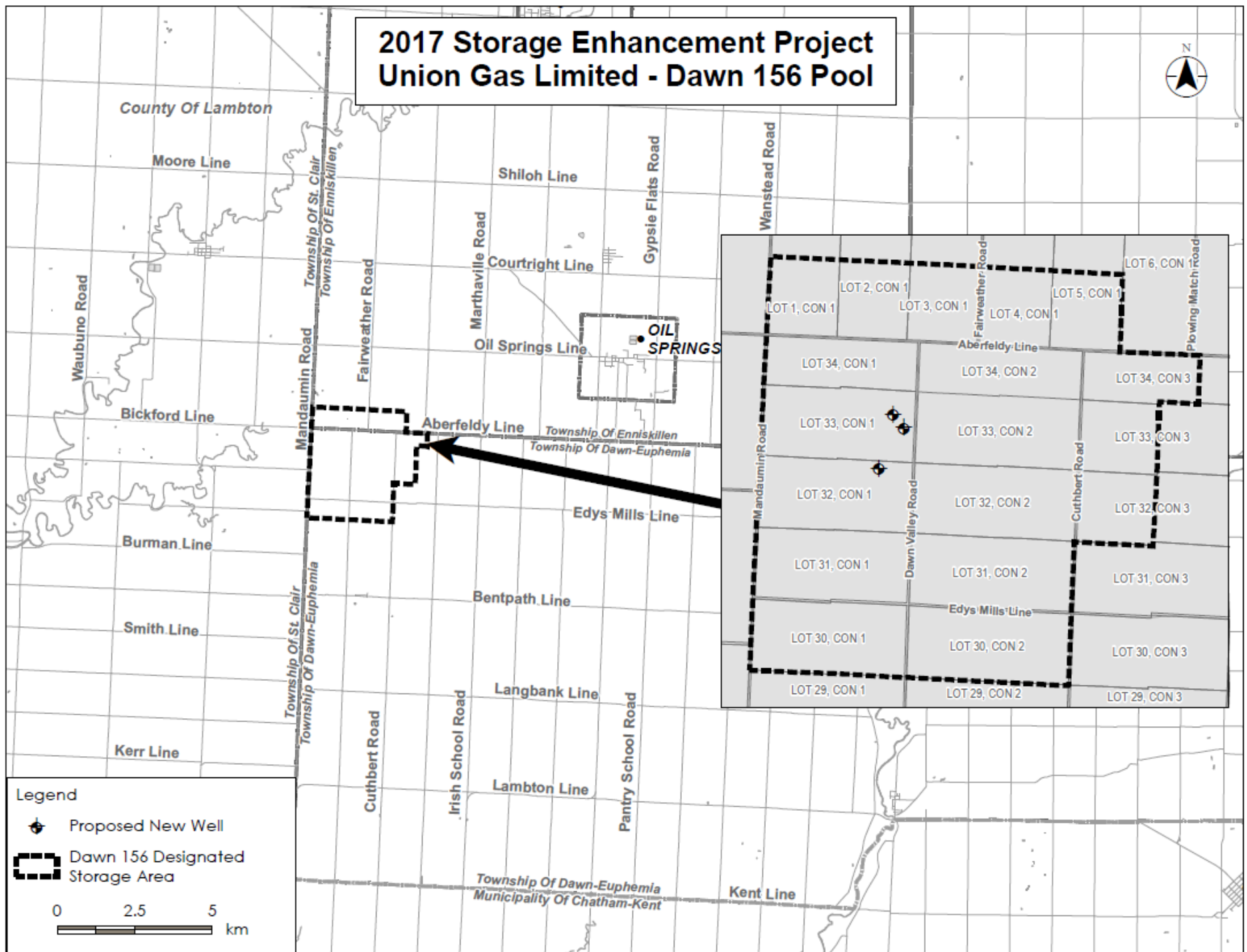
Appendix A

General Location Maps

2017 Storage Enhancement Project Union Gas Limited - Bentpath Pool



2017 Storage Enhancement Project Union Gas Limited - Dawn 156 Pool



Appendix B

Conditions of Approval

Union Gas Limited
EB-2016-0322
Conditions of Licence - Well Drilling and
Operation

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. The authority granted under this licence 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.
3. 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 licence and these Conditions.
4. 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.
5. 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.
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 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.

7. 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.

**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.
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 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.

Appendix C

Change Requests and Approvals



July 7, 2017

RESS and Courier

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Union Gas Limited (“Union”)
2017 Storage Enhancement Project
Board File # EB-2016-0322**

Please find attached Change Request 1, for the above-noted project.

Union believes that this change is not significant and would appreciate your timely review and approval of this request, as construction is in progress.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5457.

Sincerely,

[original signed by]

W. T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects

cc: Nancy Marconi, OEB
Zora Crnojacki, OEB

REQUEST TO VARY

Project Name: 2017 Storage Enhancement Project

OEB file Number: EB-2016-0322

Request to Vary: 1

Description and Rationale for Change

Union is proposing the following changes in the Dawn 156 Storage Pool:

As identified in Unions pre filed evidence Union is proposing to abandon well D-223. After the well has been abandoned Union will remove the gathering pipeline that serves the well, and remove the road access to the well. Removing the pipeline and access road will avoid any future conflicts with agricultural operations in the field. Union's original plan had been to leave the pipeline and road access in place.

As identified in Unions pre-filed evidence Union is proposing to convert well D-230 to an observation well. Once this well has been converted to an observation well it is no longer necessary to have the well connected to the gathering system in the Pool. The NPS 6 gathering pipeline between Wells D-286 and D-230 will be abandoned. Due to its proximity of the gathering line to the existing road network that is still required, it is Unions plan is to abandon this pipeline in place following the TSSA guidelines. Union's original plan had been to leave the observation well connected to the gathering system

Union would also like to correct an omission on Schedule 11 of the pre filed evidence. This schedule shows well D-219 and an NPS 4 pipeline connecting this well to the gathering system. This well was abandoned and the gathering pipeline removed in 2007.

Construction and Restoration Practices

Union will follow its standard construction practices for the removal of the pipeline. The TSSA abandonment guidelines will be followed during the abandonment of the facilities. The land will be returned to their current condition once construction has been completed.

Environmental

No new environmental mitigation measures will be required.

Consultation

Union has discussed the changes with the directly affected landowners, who have not identified any concerns.

Lands

The landowners have not identified any concerns with Unions proposal.

Costs

As this project is part of Union's un-regulated storage business, any costs increase will not be borne by Union's ratepayers. The proposed changes will increase the costs of the project by less than \$10,000. These additional costs can be covered by the project contingencies.

Schedule

This change will not result in a change to the in-service date of the project.

Attachments

A map showing the pipelines and access roads that will be removed or abandoned can be found at Schedule 1.

Ontario Energy
Board
P.O. Box 2319
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Toronto ON M4P 1E4
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Facsimile: 416-440-7656
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Commission de l'énergie
de l'Ontario
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BY E-MAIL

July 24, 2017

W.T. Wachsmuth, RPF
Union Gas Limited
Senior Administrator, Regulatory Projects
P.O. Box 2001, 50 Keil Drive North
Chatham, ON N7M 5M1

Dear Mr. Wachsmuth:

**Re: 2017 Storage Enhancement Project – EB-2016-0322
Change Request No. 1**

The Ontario Energy Board (OEB) is in receipt of the letter dated July 7, 2017 from Union Gas Limited (Union) advising the OEB of changes to the 2017 Storage Enhancement Project (Change Request No. 1).

The changes are in relation to the method of abandonment of gathering pipelines and road access to wells D-230 and D-223. Both wells are in Union's Dawn 156 Storage Pool. 1

The well D-230 will be converted from an injection/withdrawal well to an observation well. For this reason, the gathering line connected to the well D-230 will not be needed and will be abandoned in place. Union explained that the abandonment in place is the proposed method because the pipeline is located under the access road which will remain in service to maintain the observation well. Union will follow the TSSA pipeline abandonment guidelines to complete the abandonment of the gathering pipeline in place. The landowner did not have any concerns.

Union will abandon the injection/withdrawal well D-223. The D-223 well will not be in use and neither the gathering pipeline nor the access road will be needed. Union explained that both the pipeline and the access road connected to the D-223 well will be

1 The application EB-2016-0322 was silent on the abandonment methods for these facilities.

removed from the ground. Union noted that the directly affected landowner agrees with the removal. Union estimated that this change will increase the costs of the project by about \$10,000.

As the Manager, Application Policy and Climate Change, I have been delegated the authority of the OEB under Section 6 of the *Ontario Energy Board Act, 1998* to determine whether Union's proposal will result in material changes to the leave to construct granted by the OEB in the EB-2016-0322 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

I note that Union has discussed the changes with the directly affected landowners who have not identified any concerns. I also note that no new environment measures are required and that Union will follow its standard construction practices for the removal of the pipeline and the TSSA abandonment guidelines. The land will also be returned to their current condition once construction has been completed. I finally note that the costs associated with these changes will not be borne by ratepayers since these facilities are part of Union's un-regulated storage business.

Based on my review of the information provided, I find that the described change does not materially impact the leave granted by the OEB. I hereby approve the proposed change.

Yours truly,

Original signed by

Pascale Duguay
Manager, Application Policy and Climate Change



September 27, 2017

RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Union Gas Limited ("Union")
2017 Storage Enhancement Project
Board File # EB-2016-0322**

Please find attached Change Requests 2, 3, and 4, for the above-noted project.

Union would appreciate your timely review and approval of these requests.

Union has discussed the well drilling change request with Mr. Jug Manocha at the Ministry of Natural Resources and Forestry and he has not identified any issues with the proposed changes.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5457.

Sincerely,

[original signed by]

W. T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects

cc: Nancy Marconi, OEB
Zora Crnojacki, OEB
Ritchie Murray, OEB
Jug Manocha, MNRF

REQUEST TO VARY

Project Name: 2017 Storage Enhancement Project

OEB file Number: EB-2016-0322

Request to Vary: 2

Description and Rationale for Change

Union is proposing to change the top-hole location for well UB14. The surface location will be moved approximately 5 metres south from the location identified in Union's pre-filed evidence.

During the drilling of UB14 the drill bit became stuck in the wellbore approximately 290 metres below the surface. Union made a number of attempts to remove the stuck drill bit but was unsuccessful in removing the bit and has subsequently abandoned the well.

Union has had discussions with MNRF regarding re-drilling UB14. Union will submit a Form 1 to the MNRF reflecting the updated name (UB14A) and well location. MNRF has informed Union that it can re-drill the well, utilizing the same drilling program, within 5 metres of the original location it is only required to submit an updated Form 1 not a new application.

Construction and Restoration Practices

Union is proposing to drill UB14A from the same well pad that was used for the original well drilling.

Union will implement additional measures during well drilling to reduce the risk of getting the drill bit stuck again. These include ensuring a good seal around the retrievable intermediate casing, additional monitoring of well cuttings and adding drilling jars earlier in the process.

Environmental

No new environmental mitigation measures will be required.

Consultation

Union has discussed the changes with the MNRF and the directly affected landowner.

Lands

The landowner has not identified any concerns with Union's proposal.

Costs

As this project is part of Union's un-regulated storage business, any costs increase will not be borne by Union's ratepayers. The proposed changes will increase the costs of the project by approximately \$300,000.

Schedule

This change will result in the final in-service date of the project being extended to April 2018.

Attachments

No attachments.

REQUEST TO VARY

Project Name: 2017 Storage Enhancement Project

OEB file Number: EB-2016-0322

Request to Vary: 3

Description and Rationale for Change

Union is proposing to delay the completion of wells D286 and D287 until the April 2018. Construction of the 600 metres of NPS 12 gathering pipeline within the Dawn 156 and Bentpath pool has also been delayed.

The drilling program in the Dawn 156 pool started late and could not be completed in the scheduled timeframe. It was necessary to put the pool back in service so that it could be filled during the normal injection season. As a result well drilling was suspended when the pool pressure exceeded 800 psi and will resume in the spring of 2018 as the pressure drops below this level.

Delivery timelines for suitable pipeline materials were delayed which resulted in a postponement of the installation of the gathering pipeline. The gathering pipeline installation will be completed during the fall pool stabilization and is expected to be completed by December 31, 2017. Final above grade well connections will be completed by April 2018.

Construction and Restoration Practices

There are no proposed changes to Unions construction and restoration practices in regard to well drilling or pipeline construction.

Environmental

No new environmental mitigation measures will be required.

Consultation

Union has discussed the changes with the directly affected landowners.

Lands

The landowners have not identified any concerns with Unions proposal.

Costs

No additional pipeline related costs are associated with the delays.

Schedule

This change will result in the final in-service date of the project being extended to April of 2018.

Attachments

No attachments.

REQUEST TO VARY

Project Name: 2017 Storage Enhancement Project

OEB file Number: EB-2016-0322

Request to Vary: 4

Description and Rationale for Change

In Union's pre-filed evidence it proposed to deepen well UB12 in the Bentpath pool. When UB12 was originally drilled it was not drilled to its proposed depth as a result of the drilling tools becoming stuck in the wellbore. Union had planned to remove the tools from the wellbore and further deepen the well as part of this project.

In 2017 Union attempted to remove this stuck drilling tool but was unsuccessful and therefore was not able to deepen the UB12.

Construction and Restoration Practices

There are no proposed changes to Union's construction and restoration practices in regard to well drilling or pipeline construction.

Environmental

No new environmental mitigation measures will be required.

Consultation

Union has discussed the changes with the directly affected landowners.

Lands

The landowners have not identified any concerns with Union's proposal.

Costs

As this project is part of Union's un-regulated storage business, any costs increase will not be borne by Union's ratepayers. As it was not possible to drill the well to the additional depth there were cost savings for the project.

Schedule

This change will not result in any changes to the in-service date of the project.

Attachments

No attachments.

Ontario Energy Board
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Commission de l'énergie
de l'Ontario
C.P. 2319
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2300, rue Yonge
Toronto ON M4P 1E4
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BY E-MAIL

September 29, 2017

Union Gas Limited
Bill Wachsmuth
Senior Administrator, Regulatory Projects
50 Keil Drive North
P.O. Box 2001
Chatham ON N7M 5M1
bwachsmuth@uniongas.com

Dear Mr. Wachsmuth:

**Re: 2017 Storage Enhancement Project – EB-2016-0322
Request to Vary
Change Request Nos. 2, 3 and 4**

The Ontario Energy Board (OEB) is in receipt of your letter dated September 27, 2017 in which Union Gas Limited (Union) advised the OEB of three changes to the 2017 Storage Enhancement Project (Change Request Nos. 2, 3 and 4).

As the Manager, Applications Policy and Climate Change, I have been delegated the authority of the OEB under section 6 of the Ontario Energy Board Act, 1998 to determine whether Union's proposals will result in material changes to the Decision granted by the OEB in the EB-2016-0322 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

I address each of the three change requests in the following sections.

Change Request No. 2

This request involves the relocation of the top-hole location for well UB14.

Union explained that during the drilling of UB14, the drill bit became stuck some distance below the surface. Union made attempts to remove the stuck drill bit but was unsuccessful. Union discussed the matter with MNR who advised Union that it can re-drill the well using the same drilling program within 5 metres of the original location and is only required to submit an updated Form 1 not a new application.

Union submitted that the proposed change will not alter or impact its originally proposed construction and restoration practices, environmental mitigation measures, stakeholder consultations, or land requirements. The project costs will increase by approximately \$300,000 and the project in-service date will need to be extended to April 2018. As this project is part of Union's unregulated storage business, the costs increase and delay do not affect Union's rate-payers.

Based on my review of the information provided, I find that the described change does not materially impact the Decision granted by the OEB. I hereby approve the proposed change.

Change Request No. 3

This request involves a delay in the completion of well D286, well D287, and the construction of 600 meters of NPS 12 gathering pipeline within the Dawn 156 pool until April 2018.

Union explained that a delay in obtaining suitable pipeline materials resulted in being unable to complete the Dawn 156 drilling program. As this pool needed to be filled during the normal injection season, the drilling program was suspended until the spring of 2018. The gathering pipeline installation will be completed during the fall pool stabilization and is expected to be completed by December 31, 2017. Final above grade well connections will be completed by April 2018.

Union submits that its proposed change will not alter or impact its originally proposed construction and restoration practices, environmental mitigation measures, stakeholder consultations, land requirements or costs. However, the project schedule will need to be extended to April 2018. There are no additional costs associated with the delays.

Based on my review of the information provided, I find that the described change does not materially impact the Decision granted by the OEB. I hereby approve the proposed change.

Change Request No. 4

This request involves the deepening of UB12 in the Bentpath pool.

Union explained that when well UB12 was originally drilled, the drill tools became stuck and the well was not taken to its full planned depth. The purpose of the deepening project was to remove the stuck tools and deepen the well to its originally planned depth. However, removal of the stuck tools was not possible and hence the well could not be deepened.

Union submitted that termination of this part of the project will not alter or impact its originally proposed construction and restoration practices, environmental mitigation

measures, stakeholder consultations, or land requirements for the other elements of this project. The project costs will decrease, but, as this project is part of Union's unregulated storage business, the cost savings do not affect Union's rate-payers.

Based on my review of the information provided, I find that the described change does not materially impact the Decision granted by the OEB. I hereby approve the proposed change.

Yours truly,

Original signed by

Pascale Duguay
Manager, Applications Policy and Climate Change



April 12, 2018

RESS

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Union Gas Limited ("Union")
2017 Storage Enhancement Project
Board File # EB-2016-0322**

Please find attached Change Request 5 for the above-noted project.

Union believes that this change is not significant and would appreciate your timely review and approval of this request.

In the event that you have any questions or would like to discuss in more detail, please do not hesitate to contact me at 519-436-5457.

Sincerely,

[original signed by]

W. T. (Bill) Wachsmuth, RPF
Senior Administrator, Regulatory Projects

cc: Nancy Marconi, OEB
Zora Crnojacki, OEB
Ritchie Murray, OEB

REQUEST TO VARY

Project Name: 2017 Storage Enhancement Project

OEB file Number: EB-2016-0322

Request to Vary: 5

Description and Rationale for Change

In Change Request 3 Union identified that the final in-service date for this Project would be April 2018. Due to additional delays the final in-service for this Project will be the summer of 2018.

The drilling of the Bentpath UB14 well has been delayed. Completion of all of the wells in the 156 Pool took longer than anticipated and the drilling of the UB14 well has not been completed as quickly as planned.

Construction and Restoration Practices

There are no proposed changes to Unions construction and restoration practices in regard to well drilling or pipeline construction.

Environmental

No new environmental mitigation measures will be required.

Consultation

Union has discussed the changes with the directly affected landowners.

Lands

The landowners have not identified any concerns with Unions proposal.

Costs

No additional pipeline related costs are associated with the delays.

Schedule

This change will result in the final in-service date of the project being extended to the summer of 2018.

Attachments

No attachments.

Ontario Energy Board
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Toronto ON M4P 1E4
Téléphone: 416-481-1967
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BY E-MAIL

April 24, 2018

Union Gas Limited
Bill Wachsmuth
Senior Administrator, Regulatory Projects
50 Keil Drive North
P.O. Box 2001
Chatham ON N7M 5M1
bwachsmuth@uniongas.com

Dear Mr. Wachsmuth:

**Re: Union Gas Limited
EB-2016-0322 2017 Storage Enhancement Project
Request to Vary / Change Request No. 5**

The Ontario Energy Board (OEB) is in receipt of your letter dated April 12, 2018, in which Union Gas Limited (Union Gas) requests a variance to the OEB approved 2017 Storage Enhancement Project (Project). In particular, this change request (Change Request 5) pertains to extending the final in-service date of the project to the summer of 2018.

In Change Request 3, Union identified the final in-service date for this Project as April 2018. However, the drilling of Bentpath UB14 was delayed, as the completion of all the wells in the 156 Pool took longer than anticipated and the drilling of the UB14 well was not completed as quickly as planned. Due to this delay, Union Gas proposes to extend the final in-service date for this Project to the summer of 2018.

Union Gas submits that this change will not modify the Project's originally proposed construction or restoration practices, environmental mitigation measures, land use requirements or capital costs.

As the Manager, Applications Supply and Infrastructure, I have been delegated the authority of the OEB under section 6 of the Ontario Energy Board Act, 1998 to determine whether Union's proposal will result in material changes to the leave to construct granted by the OEB in the EB-2016-0322 proceeding. I have been further granted the authority to approve any changes that I have concluded are not material.

Based on my review of the information provided, I find that the described changes do not materially impact the leave granted by the OEB. I hereby approve the proposed change.

Yours truly,

Original Signed by

Nancy Marconi
Manager, Applications Supply and Infrastructure

Appendix D

Summary of Landowner Complaints

SUMMARY OF LANDOWNER COMPLAINTS

2017 Storage Enhancement Project

Date of Complaint	Property Identification Number	Complaint	Resolution	Status
05/16/2018	NE Lot 31, Con 4, Dawn-Euphemia	When Well UB14 was being drilled the landowner stated it was very uncomfortable being outside with the constant noise of gas pressure being released. Landowner had holidays scheduled for the following week and wanted to spend time outside getting work done.	May 17 – Landowner meeting. During the meeting there was a noticeable noise level and a distinct odour of gas. We discussed safety, the noise interference and compensation for the inconvenience. Compensation was affirmed to the landowners for the inconvenience.	May 22 - Rational The construction activities resulted in a disturbance to the directly affected landowner. Resolved/Resolution Complete

Appendix E


Executive Certifications

2017 Storage Enhancement Project

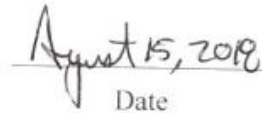
EB-2016-0322

August 15, 2018

I hereby certify that Union Gas Limited has relied on the evidence filed with the OEB in EB-2016-0322 proceeding and complied with applicable laws, regulations and codes pertaining to the construction of the proposed wells, as per Condition 6 (a) (i) of the *Conditions of Licence – Well Drilling and Operations*.


Paul Rietdyk, P.Eng.

Vice President, Engineering, Construction,
and Storage and Transmission Operations


Date

Condition 6 (a) (i)

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 copy (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 certification, by a senior executive of the company, of Union's adherence to Condition 1;

Condition 1

Union Gas Limited (Union) shall rely on the evidence filed with the OEB in EB-2016-0322 proceeding and comply with the applicable laws, regulations and codes pertaining to the construction of the proposed wells.



2017 Storage Enhancement Project

EB-2016-0322

August 15, 2018

I hereby certify that Union Gas Limited has obtained all other approvals, permits, licenses, and certificates required to construct, operate, and maintain the project as per Condition 6 (a) (v) of the *Conditions of Licence – Well Drilling and Operation*.

Paul Rietdyk, P.Eng.

Vice President, Engineering, Construction,
and Storage and Transmission Operations

August 15, 2018
Date

Condition 6 (a) (v)

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 copy (searchable PDF) version of each of the following reports:
 - a) a post construction report, within three months of the in-service date, which shall:
 - v. provide certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.



2017 Storage Enhancement Project

EB-2016-0322

August 15, 2018

I hereby certify that Union Gas Limited has constructed the facilities and restored the land in accordance with the OEB's Decision and Order in EB-2016-0322 and the Conditions of Approval, as per Condition 6 (a) (i) of the *Pipelines – Leave to Construct Conditions of Approval*.

Paul Rietdyk, P.Eng.

Vice President, Engineering, Construction,
and Storage and Transmission Operations

August 15, 2018
Date

Condition 6 (a) (i)

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 copy (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 certification, by a senior executive of the company, of Union's adherence to Condition 1;

Condition 1

Union Gas Limited (Union) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-2017-0322 and these Conditions of Approval.




2017 Storage Enhancement Project

EB-2016-0322

August 15, 2018

I hereby certify that Union Gas Limited has obtained all other approvals, permits, licenses, and certificates required to construct, operate, and maintain the project as per Condition 6 (a) (v) of the *Pipelines – Leave to Construct Conditions of Approval*.



Paul Rietdyk, P.Eng.

Vice President, Engineering, Construction,
and Storage and Transmission Operations

August 15, 2018
Date

Condition 6 (a) (v)

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 copy (searchable PDF) version of each of the following reports:
 - a) a post construction report, within three months of the in-service date, which shall:
 - v. provide certification, by a senior executive of the company, that the company has obtained all other approvals, permits, licenses, and certificates required to construct, operate and maintain the proposed project.

Appendix F

Photograph Inventory



1. Drilling pads are reduced to the smallest size as practical so as to minimize disruption to agricultural operations.



2. Typical well drilling set up on a gravel work area.



3. Installing an all-weather access road. Geotextile is overlain with gravel to prevent impacts to surrounding agricultural soil.



4. Pipe is strung out on supports prior to welding and lowering-in the trench.



5. Lowering-in a section of pipe to connect a new well to the gathering system.



6. Backfilling the trench with sand prior to backfilling with original soil.



7. Restoring the work area back to its original condition.



8. Re-installed all permanent fencing after construction.