

February 7, 2017

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**

Further to the interrogatories received in the above noted matter, please find attached two copies of Union’s responses.

Sincerely,

*[Original Signed By]*

Shelley Bechard  
Administrative Analyst, Regulatory Projects

Encl.

cc: Nancy Marconi, OEB  
Zora Crnojacki, OEB  
Andrew Mandyam, Enbridge  
Tania Persad, Enbridge  
Erin Henderson, Hydro One  
Demetrius Kappos, MNRF

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, page 2, paragraph 7

Union determined that the Dawn 156 and Bentpath pools are the preferred pools for increases in pressure and deliverability.

- a) Please indicate which studies or models were the basis for Union's assessment and selection of the Dawn 156 and Bentpath pools as the preferred options for meeting the identified needs.
  - b) Please summarize and define the criteria used to select these two pools for the Project.
- 

**Response:**

- a) Union first received approval to delta pressure to 17.2 kPa/m (0.76 psi/ft) with the approval of EB-2012-0391 (for the Bentpath and Rosedale Pools). Since that time Union has successfully delta pressured nine additional pools to 17.2 kPa/m (0.76 psi/ft) (see Schedule 2 of Union's pre-filed evidence). While there are many factors that determined the order that these pools were delta pressured, Dawn 156 is the last pool that Union is planning to delta pressure to 17.2 kPa/m (0.76 psi/ft) at this time.

In order to determine the preferred pools to increase deliverability, Union utilizes a proprietary network analysis model to hydraulically model its entire storage system. This model is complete with piping, valving, compressors, storage pools and other facilities. The model was utilized to evaluate the deliverability impact of adding wells to different pools. Through this analysis Union determined that the Dawn 156, Bentpath and Bickford Pools were the preferred locations to add wells to meet the required deliverability. Please see Union's response to B.Staff.2 for an explanation as to why the proposed wells in the Bickford Pool will be included in a subsequent application in 2017.

- b) As described in part (a) the Dawn 156, Bentpath and Bickford Pools were selected as the preferred location for deliverability enhancements based on a review of all of Union's pools. Pools were evaluated to determine additional deliverability with the addition of a new well(s). Additionally, two of the three wells proposed at the Dawn 156 Pool are required to replace the two wells being abandoned as part of this project.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, pages 4-5 “Need for the Facilities”

Union asserts that the Project is needed based on a growing market demand for increased storage space and deliverability in Ontario.

Union identified that an additional working capacity of 49,000 cubic metres will be used to meet the requirements of its storage service customers.

Union stated that additional deliverability of 1,800 cubic metres per day has been contracted by a natural gas-fired generation plant. Union indicated that not all of deliverability service requested by the gas-fired generating plant will be met by the Project and that Union plans to apply for additional storage enhancement (i.e. a second phase) in 2017 to meet the full demand of this customer.

- a) Please provide quantitative summary information on the long-term growing demand in Ontario for storage space and deliverability annually, starting in 2017. Indicate the reference studies and sources used for the forecast.
- b) Please specify which of Union’s storage service customers will be served by the additional working capacity resulting from increased pressure in the Dawn 156 pool.
- c) Please discuss the rationale for Union’s decision to not enhance the deliverability necessary to meet the full demand of the generating plant at the same time, but to instead develop it in two phases. Address business, economic, environmental and cost aspects, as well as technical and operational aspects of Union’s two-phase plan. Would there be any efficiencies gained by addressing the full demand at once? (For example, from a regulatory approval, cost, environmental, or construction perspective)

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**Response:**

- a) Union continues to see strong interest for storage services at Dawn, selling all available storage space and deliverability. Union has expanded its storage capacity by almost 5 PJ since 2013 and has sold that capacity as part of its storage portfolio. Union expects that incremental storage space created by this project can be sold as part of Union’s storage portfolio at satisfactory market based rates. The deliverability created by the project is being sold to TCE Napanee under a long term contract.

- b) The storage capacity created by the project will be sold to parties wishing to transact at Dawn, which includes both existing non-utility customers and new non-utility customers (marketers or LDCs). Union's existing non-utility customers (storage) and Union's existing transportation customers can be referenced on the Index of Customers found at:

<https://www.uniongas.com/storage-and-transportation/informational-postings/storage-holders>

<https://www.uniongas.com/storage-and-transportation/informational-postings/transport-shippers>

The deliverability created by the project is being sold to TCE Napanee under a long-term contract.

- c) As described in Union's response to B.Staff.1, Union has determined that the preferred approach to enhancing deliverability to serve the incremental TCE Napanee demand is by drilling new wells at the existing Dawn 156, Bentpath and Bickford Pools. Union had all the geophysical information necessary to select the proposed well locations in the Dawn 156 and Bethpath Pools. However, 3D seismic was required at the Bickford Pool to select the location of the new wells within the pool. Due to the time required to complete the 3D seismic survey and process/interpret the data, it was not possible to have the well locations selected in time to include in this application and therefore to complete the drilling in 2017. The 3D seismic survey at the Bickford Pool was completed in December 2016 and the data is currently being processed and interpreted. Union expects to have proposed locations for the new wells at the Bickford Pool by May 2017 and is planning to submit an application in October of 2017 for approval of the proposed incremental facilities at the Bickford Pool.

It is Union's expectation that completing the full project with the described two phase approach prior to November 2018 will allow Union to meet the requirements of the TCE Napanee facilities during commissioning and testing, which is set to begin early in 2018. Union notes it is contractually responsible for bridging the partial year gap between contract start and full project completion, if required.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, pages 9-10, paragraphs 37-42

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 8,290 kPaa, which 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 “Storage of Hydrocarbons in Underground Formations” (CSA Z341.1-14) to the satisfaction of the Ministry of Natural Resources and Forestry (MNRF). 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 Neighbouring 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 Engineering and Assessment of Neighbouring Activities in MNRF’s final submissions in this proceeding. It would be procedurally more efficient if Union provides evidence on the record confirming that the MNRF has reviewed and is satisfied with Union’s compliance with the CSA Z341.1-14 and the Dawn 156 Pool Reports.

Did or will Union communicate with the MNRF to obtain and file MNRF’s comments on compliance with the CSA Z341.1-14 and on the Dawn 156 Pool Reports prior to the date of submissions in this proceeding? If not, please explain.

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**Response:**

Please see Union’s response at B.Staff.4 b and c.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, page 9, paragraph 39 and page 10, paragraph 42

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. 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, as well as a statement on compliance with the CSA Z341.1-14, from the MNRF will be provided in MNRF's final submission in this proceeding. It would be procedurally more efficient if Union provides evidence on the record confirming that the MNRF has reviewed and is satisfied with Union's compliance with the CSA Z341.1-14 and the studies provided.

- a) Please list the studies filed with the MNRF's review as they relate to the Dawn 156 and to the Bentpath pool separately.
- b) What is the anticipated timeline for MNRF's review and final comments and conclusion on compliance with the CSA Z341.1-14?
- c) Did Union discuss with the MNRF the option of obtaining their comments prior to the date for written submissions in this proceeding? If not, please explain. If so, what are the anticipated timelines for obtaining the comments and filing them on the record with the OEB?

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**Response:**

- a) 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 Neighbouring 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 Neighbouring Activities

An Engineering Assessment is not required for the proposed well drilling in the Bentpath Pool since the pressure in the pool is not changing. However, an Engineering Assessment for the Bentpath Pool was 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.

- b) As noted in Procedural Order No. 1 which was issued by the Board on January 10, 2017, it is Union's understanding that the MNRF will file its final comments and conclusions on Union's compliance with the CSA Z341.1-14 code when they make their written submissions on February 21, 2017.
- c) Prior to submitting this application, Union met with the MNRF to review the proposed project and also provided the MNRF with the supporting information required by the MNRF to review the project. Union requested comments regarding compliance with CSA Z341.1-14. The MNRF indicated that they would participate in the OEB process. The MNRF has not expressed any concerns regarding this project.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, page 13, paragraphs 60 and 61

Union specified the pipeline design location factors it uses for different locations (Class 1 and Class 2).

- a) Please provide excerpts and references from relevant codes that define design factors and Class locations for pipelines.
- b) What is the basis for Union's decision to design the pipeline to meet or exceed Class 2 location requirements?

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**Response:**

- a) Union Gas referenced CSA Z662-15 table 4.2 which outlines the proper location factors to apply for each class location scenario. The class location is determined in clauses 4.3.3 through 4.3.4. Please see Attachment 1 for an excerpt from the CSA code dealing with the class location of pipelines.
- b) While the specific pipeline facilities in this application do not meet a class 2 location there are areas within the Designated Storage Area that do meet the class 2 location requirements. The decision was made to design all pipelines within the Designated Storage Area to a class 2 location to anticipate any future growth that may occur, and to keep the class location consistent throughout the Pool.



Δ

**Table 4.2**  
**Location factor for steel pipe**  
(See Clauses [4.3.7](#), [15.3.1.3](#), [15.10.4](#), [16.9.2.1](#), [17.4.3.4](#), and Table [C.2](#).)

**C** There is a commentary available for this Table.

Application	Location factor ( <i>L</i> )			
	Class 1 location	Class 2 location	Class 3 location	Class 4 location
Gas (non-sour service)				
General	1.000	0.900	0.700	0.550
Cased crossings	1.000	0.900	0.700	0.550
Roads*	0.750	0.625	0.625	0.500
Railways	0.625	0.625	0.625	0.500
Stations	0.625	0.625	0.625	0.500
Other	0.750	0.750	0.625	0.500
HVP (non-sour service) and CO <sub>2</sub> (non-sour service)				

### 4.3.3 Class location designations

**C** There is a commentary available for this Clause.

Class location designations shall be as given in Table 4.1.

**Table 4.1**  
**Class location designations**  
(See Clauses 4.3.3 and 4.3.4.2.)

**C** There is a commentary available for this Table.

Development within the class location assessment area	Class location designation
None	Class 1
10 or fewer dwelling units	Class 1
One or more of the following: a) 11 to 45 dwelling units; b) a building occupied by 20 or more persons during normal use; c) a small, well-defined outside area occupied by 20 or more persons during normal use (e.g., a playground, recreation area, outdoor theatre, or other place of public assembly); or d) an industrial installation (e.g., a chemical plant or a hazardous substance storage area) where release of the service fluid from the pipeline can cause the industrial installation to produce a dangerous or environmentally hazardous condition.	Class 2
46 or more dwelling units	Class 3
A prevalence of buildings intended for human occupancy with 4 or more storeys above ground	Class 4

**Notes:**

- 1) Each dwelling unit in a multiple-dwelling-unit building shall be counted separately.
- 2) If it is likely that there will be future development in the class location assessment area sufficient to increase the class location designation, consideration shall be given to designing, pressure testing, operating, and maintaining the pipeline in accordance with the requirements applicable to the higher class location.
- 3) Consideration shall be given to designating class location assessment areas that contain buildings intended for human occupancy from which rapid evacuation can be difficult (e.g., hospitals or nursing homes) as Class 3 locations.

4.3.4 Class location end boundaries

### 4.3.4 Class location end boundaries

**C** There is a commentary available for this Clause.

**Notes:**

- 1) Class location end boundaries are perpendicular to the pipeline axis.
- 2) Class location end boundaries are determined by separately applying the requirements of this Clause at each end of the class location.

#### 4.3.4.1

Where class location designations are determined by the dwelling-unit density, class location end boundaries shall be determined using abutting pairs of class location assessment areas (see Figure 4.1).

#### 4.3.4.2

**G** There is a commentary available for this Clause.

Except as allowed by Clause 4.3.4.3, where a Class 2 location designation is determined by the dwelling-unit density (see Table 4.1), the end boundaries for such a Class 2 location shall be located at least 200 m, measured parallel to the pipeline axis, from the dwelling unit that is located

- a) just inside a class location assessment area that contains more than 10 but fewer than 46 dwelling units; and
- b) just outside the closest class location assessment area that contains 10 or fewer dwelling units.

*Note: See Figure 4.1 a) for an example showing the determination of an end boundary for such a Class 2 location.*

#### 4.3.4.3

Where a Class 2 location designation is determined by the dwelling-unit density and such a Class 2 location is adjacent to an undeveloped class location assessment area, the end boundary for such a Class 2 location may be determined without counting any dwelling units that are beyond the undeveloped class location area.

*Note: See Figure 4.1 b) for an example showing the determination of an end boundary for such a Class 2 location.*

#### 4.3.4.4

**G** There is a commentary available for this Clause.

Where a Class 2 location designation is determined by items other than the dwelling-unit density, the end boundaries for such a Class 2 location shall be at least 200 m, measured parallel to the pipeline axis, from each building that is occupied by 20 or more persons during normal use, each place of public assembly that is occupied by 20 or more persons during normal use, and each industrial installation where release of service fluids from the pipeline can cause the industrial installation to produce a dangerous or environmentally hazardous condition, whichever is applicable.

#### 4.3.4.5

**G** There is a commentary available for this Clause.

Except as allowed by Clause 4.3.4.6, where a Class 3 location designation is determined by the dwelling-unit density, the end boundaries for such a Class 3 location shall be at least 200 m, measured parallel to the pipeline axis, from the dwelling unit that is located

- a) just inside a class location assessment area that contains 46 or more dwelling units; and
- b) just outside the closest class location assessment area that contains 45 or fewer dwelling units.

*Note: See Figure 4.1 c) for an example showing the determination of an end boundary for such a Class 3 location.*

#### 4.3.4.6

Where a Class 3 location designation is determined by the dwelling-unit density and such a Class 3 location is adjacent to an undeveloped class location assessment area, the end boundary for such a Class 3 location may be determined without counting any dwelling units that are beyond the far end of such an undeveloped class location area.

*Note: See Figure 4.1 d) for an example showing the determination of an end boundary for such a Class 3 location.*

#### 4.3.4.7

**C** There is a commentary available for this Clause.

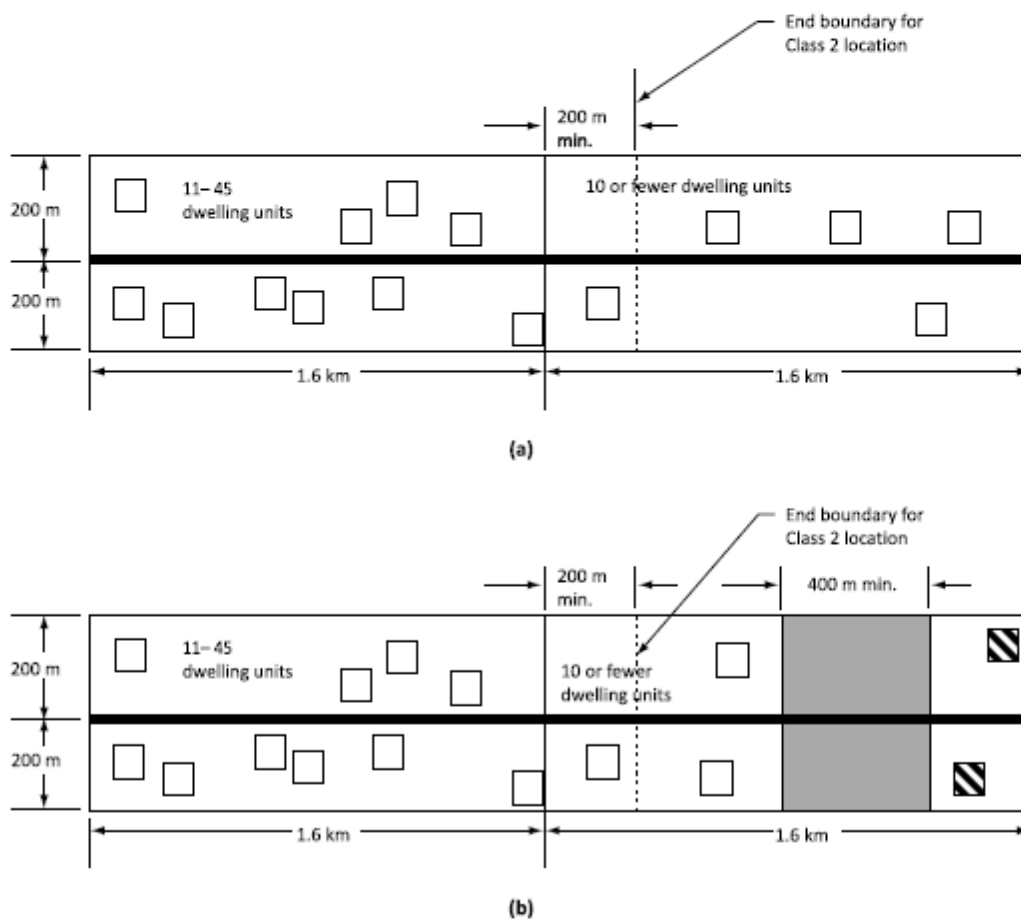
Where a Class 3 location designation results from the consideration of rapid evacuation from a building intended for human occupancy, the end boundaries for such a Class 3 location shall be at least 200 m, measured parallel to the pipeline axis, from each such building where rapid evacuation can be difficult.

#### 4.3.4.8

**C** There is a commentary available for this Clause.

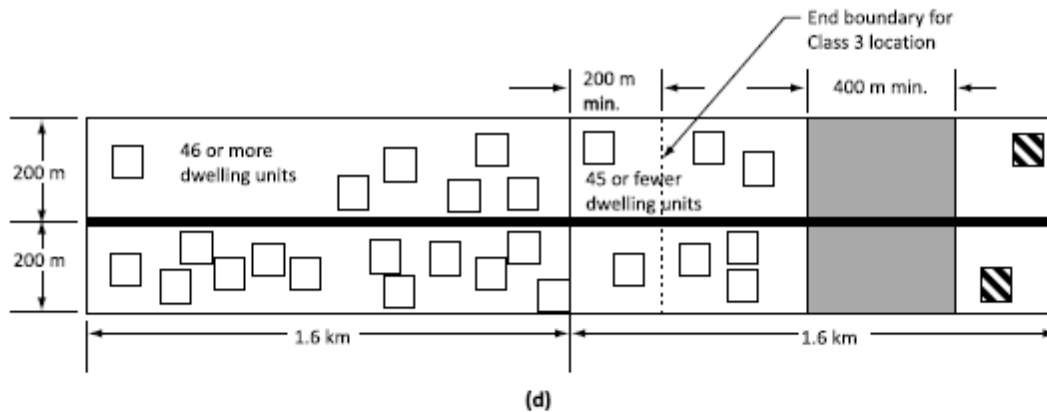
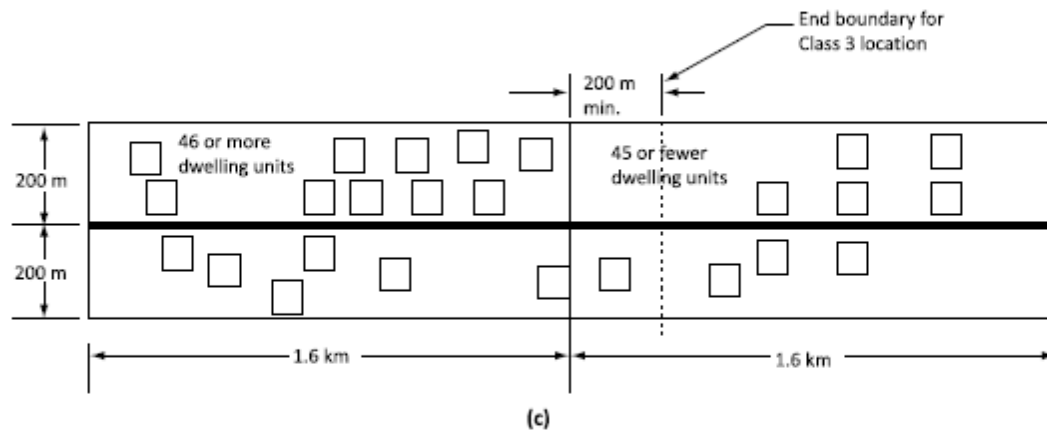
The end boundaries for Class 4 locations shall be at least 200 m, measured parallel to the pipeline axis, from the nearest building intended for human occupancy with four or more storeys above ground.

**Figure 4.1**  
**Class location end boundaries, determined by dwelling-unit density**  
(See Clauses 4.3.4.1 to 4.3.4.3, 4.3.4.5, and 4.3.4.6.)







(Continued)

**Figure 4.1 (Concluded)**



**Legend:**

-  Pipeline
-  Dwelling unit or multiple-dwelling-unit building that is to be counted in determining the end boundary location
-  Dwelling unit or multiple-dwelling-unit building that need not be counted in determining the end boundary location
-  Undeveloped class location assessment area

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, page 15, page 16, paragraph 75, line 4 and Schedule 21 “Pipeline Easement”

Union noted that the drilling of all wells, construction of pipelines and roadways will be in accordance with 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 in the same form as Union filed in Schedule 21 of its evidence.

Union applied for approval under section 90 of the OEB Act to construct the pipelines. 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 Board. Union also stated that it will obtain these easements after construction.

- a) Has the form of Pipeline Easement agreement that Union has offered or will offer to the landowners whose properties are directly affected by the proposed pipeline been previously approved by the OEB? If so, in which proceedings?
- b) Please explain the rationale for Union obtaining easement agreements after construction instead of prior to construction of the proposed facilities?

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**Response:**

- a) The form of easement has been amended from the form of easement previously approved by the Board in the EB-2014-0261 proceeding to include amendments to CSA Z662-15 with respect to the prohibition of storage, flammable material, solid or liquid spoil, refuge waste or effluent on the easement.
- b) Easement agreements cannot be registered with the local land registry office until the Reference Plans have been completed which show the exact location of the pipeline facilities. Union proposes to complete the Reference Plans after the pipelines have been constructed.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, pages 16-17 paragraphs 78-79

Union stated that three out of six landowners have signed a Letter of Acknowledgment formally agreeing to the location of proposed facilities.

- a) Please clarify which facilities locations have not been formally agreed upon by the directly affected landowners? List well locations and pipeline sections separately.
- b) What is the formal document that will set the agreed upon compensation by Union to the landowners for damages and other surface impacts of wells, pipelines and roadways construction?

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**Response:**

- a/b) All letters of acknowledgment have now been signed. Please see Attachment 1 for copies of the signed acknowledgment letters received since the filing.

# Letter of Acknowledgement

To: Union Gas Limited "Union"

From: [REDACTED]

Re: Deliverability 2017 "Project"

We, [REDACTED], are the owners of the property legally described as owner of PIN: [REDACTED] being part of Lot 32, Concession 5, Geographic Township of Dawn-Euphemia, Municipality of Lambton, have been informed by Union of the Project, as more particularly outlined on Schedule A attached hereto, and specifically confirm that Union has advised the undersigned of the following matters regarding the Project:

1. Union intends to drill Union Dawn Well No. [REDACTED] as shown on Schedule "A".
2. Union will construct a maximum, six meter wide Permanent All Weather Access Road, in accordance with the terms and conditions of Union's form of Roadway Agreement, to well number [REDACTED] being approximately ( ) meters in length as shown on Schedule A. Not Required
3. Construct a temporary well pad, and for a term of 2 years, as shown on Schedule A.
4. Construct a permanent well pad for the well, as shown on Schedule A.
5. Construct a 12" NPS natural gas pipeline(s) as shown on Schedule A ("Pipeline").
6. Register Union's standard form of easement for the construction of the Pipeline.
7. If any field tile exist within the lands to be occupied by the Proposed Union Gas Facility. A qualified tile contractor will repair all field tiles to the satisfaction of the Landowner. If necessary, Union will engage the services of a drainage consultant to recommend changes to any systematic tile to ensure proper drainage of the land following the installation of the above facilities. This may be done by having pre- construction tiling completed or wait until after all the construction is done.
8. Union will have an Ontario lands surveyor, complete all survey's necessary for the completion of this work

We have reviewed the above proposal with a Union representative. We have no objectives to the drilling of the well as referenced above and the construction of a Permanent All Weather Access Road. In exchange for these rights and privileges Union will compensation us in the amount of \$ [REDACTED] now tendered. Further payments will be made in accordance with Schedule "B" attached.

Dated this 7<sup>th</sup> day of September 2016.

[REDACTED]

[REDACTED]  
Union Gas Limited  
Janee O'Donohue  
Manager, Land Services

If notification of a tenant is required please provide their contact information in the lines below:

Tenant \_\_\_\_\_

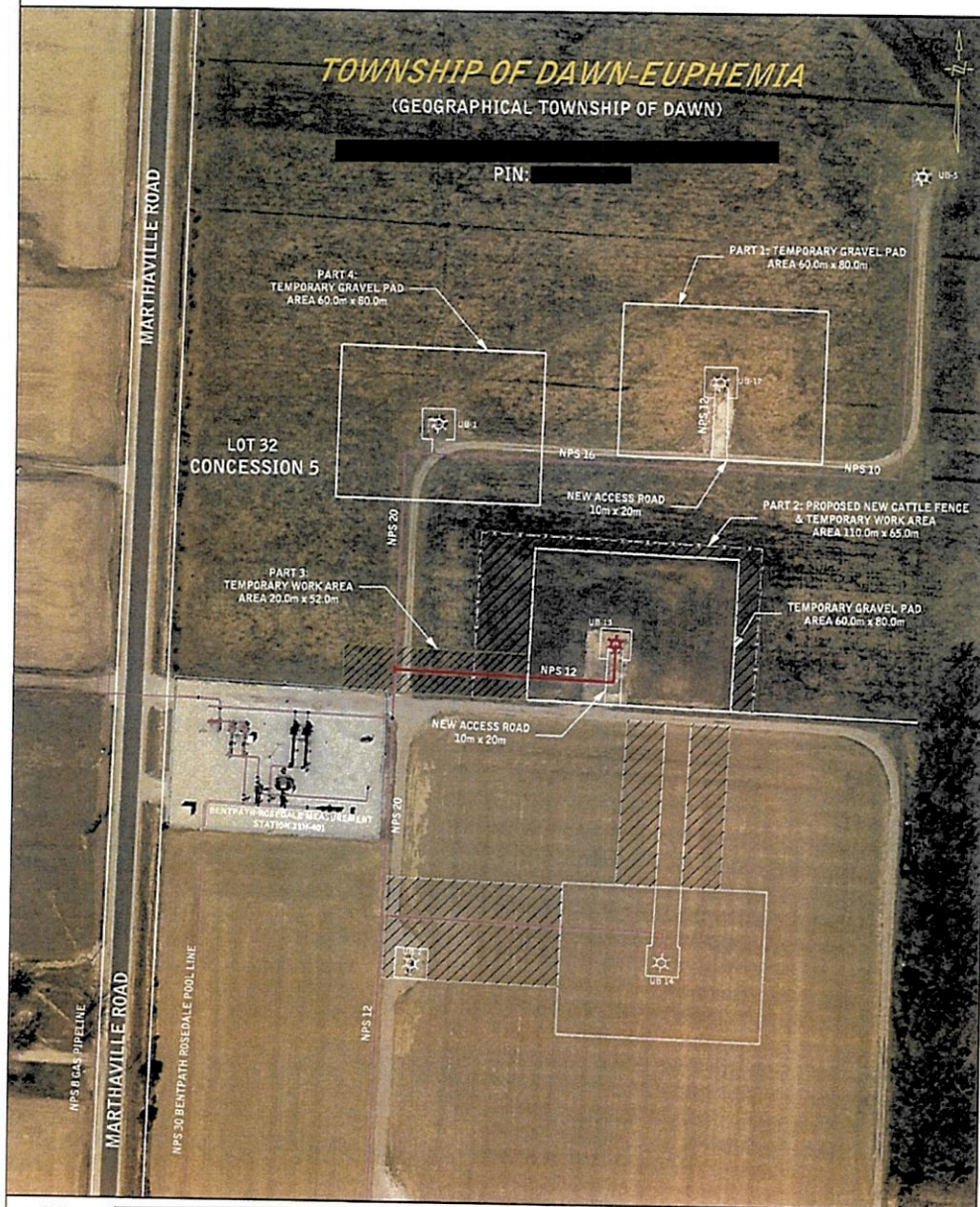
Phone # \_\_\_\_\_



# SCHEDULE A

## SCHEDULE A: PROPOSED NPS 12 GATHERING LINE TO WELL UB13

PROPERTY SKETCH  
SHOWING APPROXIMATE LOCATION OF  
PROPOSED TEMPORARY LAND USE RIGHTS  
W 1/2 LOT 32 CON 5 DAWN; S/T L810089, L810090  
SUBJECT TO AN EASEMENT IN GROSS  
OVER PT 1 PLAN 25R10244 AS IN LA140733  
TOWNSHIP OF DAWN-EUPHEMIA



# Letter of Acknowledgement

To: Union Gas Limited "Union"

From: [REDACTED]

Re: Deliverability 2017 "Project"

We, [REDACTED], are the owners of the property legally described as owner of PIN: [REDACTED] being part of Lot 33, Concession 1, Geographic Township of Dawn-Euphemia, Municipality of Lambton, [REDACTED] have been informed by Union of the Project, as more particularly outlined on Schedule A attached hereto, and specifically confirm that Union has advised the undersigned of the following matters regarding the Project:

1. Union intends to drill Union Dawn Well No. UD287 as shown on Schedule "A".
2. Union will construct a maximum, six meter wide Permanent All Weather Access Road, in accordance with the terms and conditions of Union's form of Roadway Agreement, to well number UD287 being approximately (75) meters in length as shown on Schedule A.
3. Construct a temporary well pad, and for a term of 2 years, as shown on Schedule A.
4. Construct a permanent well pad for the well, as shown on Schedule A.
5. Construct a 12" NPS natural gas pipeline(s) as shown on Schedule A ("Pipeline").
6. Register Union's standard form of easement for the construction of the Pipeline.
7. If any field tile exist within the lands to be occupied by the Proposed Union Gas Facility. A qualified tile contractor will repair all field tiles to the satisfaction of the Landowner. If necessary, Union will engage the services of a drainage consultant to recommend changes to any systematic tile to ensure proper drainage of the land following the installation of the above facilities. This may be done by having pre- construction tiling completed or wait until after all the construction is done.
8. Union will have an Ontario lands surveyor, complete all survey's necessary for the completion of this work

We have reviewed the above proposal with a Union representative. We have no objectives to the drilling of the well as referenced above and the construction of a Permanent All Weather Access Road. In exchange for these rights and privileges Union will compensation us in the amount of \$ [REDACTED] now tendered. Further payments will be made in accordance with Schedule "B" attached.

Dated this Four day of Nov 2016

[REDACTED]

[REDACTED]  
Janean O'Donohue  
Manager Land Services,  
Union Gas Limited

If notification of a tenant is required please provide their contact information in the lines below:

Tenant \_\_\_\_\_

Phone # \_\_\_\_\_



# **SCHEDULE A**

## **PROPOSED WELL LOCATIONS FOR NO. 156 POOL**

Property Sketch  
Showing Approximate Location of  
Proposed Temporary Land Use Rights For  
NE 1/4 LT 33 CON 1 DAWN S/T L571349; DAWN-EUPHEMIA



OWNER: [REDACTED]

PART	APPROX. SIZE (metres)		APPROX. AREA		PART	APPROX. SIZE (metres)		APPROX. AREA	
	(width)	(length)	(hectares)	(acres)		(width)	(length)	(hectares)	(acres)
1 (TEMP)	75.000	225.000	1.687	4.169					
2 (TEMP)	IRR.	114.000	0.251	0.622					
ACCESS ROAD	10	113.000	0.113	0.279					
PIN: [REDACTED]			SCALE: 1:4000			DATE: JUNE 22, 2016			
			*ALL DISTANCES ARE APPROXIMATE.			CAD NUMBER: PL1476			

# Letter of Acknowledgement

To: Union Gas Limited "Union"

From : [REDACTED]

Re: Deliverability 2017 "Project"

We, [REDACTED], are the owners of the property legally described as owner of PIN: [REDACTED] being part of Lot 31, Concession 4, Geographic Township of Dawn-Euphemia, Municipality of Lambton, [REDACTED] have been informed by Union of the Project, as more particularly outlined on Schedule A attached hereto, and specifically confirm that Union has advised the undersigned of the following matters regarding the Project:

1. Union intends to drill Union Dawn Well No. [REDACTED] as shown on Schedule "A".
2. Union will construct a maximum, six meter wide Permanent All Weather Access Road, in accordance with the terms and conditions of Union's form of Roadway Agreement, to well number [REDACTED] being approximately ( ) meters in length as shown on Schedule A. Not Required
3. Construct a temporary well pad, and for a term of 2 years, as shown on Schedule A.
4. Construct a permanent well pad for the well, as shown on Schedule A.
5. Construct a [REDACTED] NPS natural gas pipeline(s) as shown on Schedule A ("Pipeline"). Not Required
6. Register Union's standard form of easement for the construction of the Pipeline.
7. If any field tile exist within the lands to be occupied by the Proposed Union Gas Facility. A qualified tile contractor will repair all field tiles to the satisfaction of the Landowner. If necessary, Union will engage the services of a drainage consultant to recommend changes to any systematic tile to ensure proper drainage of the land following the installation of the above facilities. This may be done by having pre- construction tiling completed or wait until after all the construction is done.
8. Union will have an Ontario lands surveyor, complete all survey's necessary for the completion of this work

We have reviewed the above proposal with a Union representative. We have no objectives to the drilling of the well as referenced above and the construction of a Permanent All Weather Access Road. In exchange for these rights and privileges Union will compensation us in the amount of \$ [REDACTED] now tendered. Further payments will be made in accordance with Schedule "B" attached.

Dated this 15th day of November 2016

[REDACTED]

Union Gas Limited

Jane O'Donohue  
Manager, Land Services

If notification of a tenant is required please provide their contact information in the lines below:

Tenant \_\_\_\_\_

Phone # \_\_\_\_\_





UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Letter of Comment by Jake and Mary Smit, dated January 5, 2017

Jake and Mary Smit, landowners in the Dawn 156 pool filed a letter of comment with the OEB expressing the following concerns: i) gas content and water quality in the water well on their property; ii) testing and monitoring water quality in this water well; iii) noise levels resulting from operation of “156 station”; iv) fire and safety concerns related to operation of the station; and v) lack of communication initiated by Union. Union filed a letter of response dated January 18, 2017 outlining actions taken in regards to the landowners’ concerns.

- a) Are there any other steps, beyond those outlined in the letter of response by Union dated January 18, 2017, that Union plans to take to address the five concerns expressed by Jake and Mary Smit?

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**Response:**

- a) The water well testing including isotope testing to determine the source of gas in the well, has now been completed. Attachment 1 is a letter from Stantec to the Smit’s providing them with some preliminary recommendations regarding their water well. Once the results of the water well testing are available Union and Stantec Consulting will meet with the Smit’s to discuss the results of the testing.

Union’s Lands Agent will be available to discuss any other concerns identified by the Smit’s.



January 26, 2017

File: [REDACTED]

[REDACTED]

Dear [REDACTED]

**Reference: Union Gas Storage Pool Enhancement Project  
Well Monitoring Program**

On behalf of Union Gas Ltd. (Union Gas), Stantec Consulting Ltd. (Stantec) visited your residence at [REDACTED] on January 18, 2017 to document your concerns regarding your private well and to collect a water quality sample for analysis. The following letter describes some of the issues you noted regarding your well. The letter also provides observations made by Stantec during the Site visit of your well and cover.

During the visit, you mentioned that about six (6) years ago you personally installed a stainless steel pipe to attempt to vent the well. Stantec did not observe this pipe as the well is currently covered by an insulated wooden box. You mentioned that approximately twice in the last year, the wooden box blew off due to pent up gases in your well. Based on your description and Stantec's observations, it is believed that this wooden box is acting as a barrier to prevent well venting from occurring. This was discussed with you during the site visit.

Ministry of the Environment and Climate Change (MOECC) well regulations require that well caps are vented at the surface to ensure proper ventilation within the well. It is the well owners responsibility to ensure that the well meets MOECC well regulations (Ontario Regulation 903 (O.Reg. 903)). Based on the description of your recent issues and observed conditions of your well cover during visit on January 18, 2017, your well cover is not properly vented, allowing gas to build up beneath the wooden cover.

Stantec recommends that you contact a licensed well contractor to inspect the well, provide information on well venting, and complete the required upgrades to the cover and/or well to bring the well into compliance with O.Reg.903. The following MOECC website provides a list of the licensed well contractors in Ontario (<https://www.ontario.ca/page/find-licenced-well-contractors>).

During the visit on January 18, 2017, a water quality sample from your residence was collected from your kitchen tap, with an additional sample collected from a tap in the garage. The sampling was completed to document general water quality, the concentration of dissolved gas within the water and to try to evaluate the potential source of the gas. The results of the water quality testing are pending and a letter(s) detailing the standard sampling procedure, lab certificates from qualified laboratories and water quality results will be issued to you once available.

Design with community in mind





If you have any questions about this information, please contact the undersigned.

Should you have any additional questions or concerns regarding the Union Gas activity, please contact Richard Ashburn, Senior Land Agent for Union Gas, at [REDACTED]

Regards,

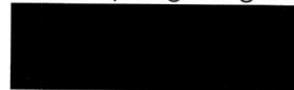
**STANTEC CONSULTING LTD.**



Jamie Koch, M. Sc., P.Geo.  
Hydrogeologist



Lesley Veale, M.Sc., P.Geo.  
Senior Hydrogeologist



c. Evan Tomek, Doug Schmidt, Richard Ashburn – Union Gas  
Kerry O'Shea - Stantec

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UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, pages 14-15 and Schedule 20: “2017 Storage Enhancement Project, Environmental Protection Plan”

The Environmental Protection Plan (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.

- a) Please file a summary table of all comments Union received to date in the process of the EPP review by the OPCC. Include any other comments received from landowners or other parties.
- b) Provide copies of letters or emails Union received and sent to the OPCC and other parties with regard to the EPP.

---

**Response:**

- a/b) Attachment 1 is a table that summarizes the comments received from the OPCC Summary for this Project. This attachment also includes the letters received from the commenting agencies and Union’s response to those comments.

OPCC Review Summary

2017 Storage Enhancement Project

AGENCY	COMMENT	RESPONSE
<p>County of Lambton Email chain beginning on October 17, 2016 and ending on January 11, 2017</p>	<p><b>1. Initial comment via email dated October 17, 2016</b></p> <p>Thank-you for providing the County of Lambton and the Township of Dawn-Euphemia with a copy of the Environmental Protection Plan for the 2017 Storage Enhancement Project within former Dawn Township.</p> <p>Council requests Union Gas Limited to enter in to a Road Use Agreement for road use/remediation purposes.</p> <p>The Township's main concern is with respect to Township roads and ensuring any damage resulting from construction traffic is remediated. Typically a survey and photographic record of road conditions is required before construction commences and roads must be restored to equal or better condition following construction. Contact Paul Dalton, the public works supervisor with the Township in this respect [REDACTED]</p> <p>It appears that there will be buildings associated with the drilling operations that will require building permits despite their being temporary. Contact the County Building Services Department [REDACTED] in this respect. The Township has agreed it will not require any site plan approval for these buildings provided its concerns with respect to road use can be addressed.</p> <p><b>2. Second comment via email dated January 3, 2017:</b></p> <p>The Township of Dawn-Euphemia was interested in knowing the status of this project as they had commented that they wished to have a road use agreement in effect and their road superintendent has not been contacted to date.</p> <p><b>3. Third comment via email dated January 4, 2017:</b></p> <p>Please touch base with Paul Dalton, Public Works, Township of Dawn-Euphemia [REDACTED]</p> <p><b>4. Fourth comment via email dated January 11, 2017:</b></p> <p>Thank-you. Please do call Paul. If there are any items that need to come before Council, a few</p>	<p><b>1. Response to initial comment via email dated October 17, 2016 :</b></p> <p>Thank you for your review of the 2017 Storage Enhancement Project Environmental Protection Plan and for your response.</p> <p>Forwarded comments to the Project Manager to ensure the concerns/requirements are addressed prior to and during construction.</p> <p><b>2. Response to second comment via email dated January 4, 2017:</b></p> <p>Requested the Project Manager provide an update to the County.</p> <p><b>3. Response to second and third comments via email dated January 11, 2017:</b></p> <p>We will make the road use agreement a priority. I will give Paul a call to discuss details and determine any of your requirements, including a survey if required.</p> <p>At a high level, the 2016 construction is expected to take place from April – October.</p> <p>The size and scale of this project is not comparable to the current projects at the Dawn compressor plant. The construction traffic will not add a significant increase in volume in the area, but we are glad to put an agreement together and meet your requirements.</p> <p><b>4. Response to fourth comment not required.</b></p>

AGENCY	COMMENT	RESPONSE
	months can disappear quickly.	B.Staff.9 Attachment 1 Page 2 of 7
Ministry of Tourism, Culture & Sport (MTCS) Email addressed to Zora Crnojacki dated December 2, 2016	Reviewed the Environmental Protection Plan report and related correspondence for the project, and understand that no built heritage or cultural heritage landscapes were identified as being impacted, and the archaeological assessment likewise did not identify any resources within the project area. Based on the documentation provided, the Heritage Program Unit at the Ministry of Tourism, Culture and Sport has no further comments on this project, other than the usual caveats about deeply buried artifacts or remains.	Not required.

**Tomek, Evan**

**From:** William Nywening [mailto:nywening@uniongas.ca]  
**Sent:** January-11-17 10:26 AM  
**To:** Lubbers, Kurtis  
**Cc:** [mailto:nywening@uniongas.ca]; Paul Dalton; Arpino, Marianna; Tomek, Evan; Newport, Rob; Learn, Michael; Cook, Chad  
**Subject:** RE: Union Gas 2017 Storage Enhancement Project

Thank-you Kurtis. Please do call Paul. If there are any items that need to come before Council, a few months can disappear quickly.

Will Nywening

**From:** Lubbers, Kurtis [mailto:kubbers@uniongas.ca]  
**Sent:** January-11-17 10:11 AM  
**To:** William Nywening  
**Cc:** [mailto:nywening@uniongas.ca]; Paul Dalton; Arpino, Marianna; Tomek, Evan; Newport, Rob; Learn, Michael; Cook, Chad  
**Subject:** Union Gas 2017 Storage Enhancement Project

Hi Will,

We will make the road use agreement a priority.

I will give Paul a call to discuss details and determine any of your requirements, including a survey if required.

At a high level, the 2016 construction is expected to take place from April – October.

The size and scale of this project is not comparable to the current projects at the Dawn compressor plant.

The construction traffic will not add a significant increase in volume in the area, but we are glad to put an agreement together and meet your requirements.

**Kurtis Lubbers**, P.Eng

Project Engineer | Union Gas Limited | A Spectra Energy Company

Email [mailto:kubbers@uniongas.ca]



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**Tomek, Evan**

Page 4 of 7

**From:** William Nywening [mailto: [REDACTED]]  
**Sent:** January-04-17 10:06 AM  
**To:** Tomek, Evan  
**Cc:** 'Donna Clermont' [mailto: [REDACTED]]; [mailto: [REDACTED]]; Corrine Nauta; Brianne Wallace; Arpino, Marianna  
**Subject:** RE: Union Gas 2017 Storage Enhancement Project

Thank-you. Please have him touch base with Paul Dalton, Public Works, Township of Dawn-Euphemia ([REDACTED])

Will Nywening

**From:** Tomek, Evan [mailto: [REDACTED]]  
**Sent:** January-04-17 9:49 AM  
**To:** William Nywening  
**Cc:** 'Donna Clermont' [mailto: [REDACTED]]; [mailto: [REDACTED]]; Corrine Nauta; Brianne Wallace; Arpino, Marianna  
**Subject:** RE: Union Gas 2017 Storage Enhancement Project

Hi Will,

I've reached out to our Project Manager who is away until next week and requested that they provide you an update. I'll follow up with him next week to ensure he follows up.

Thanks,

Evan

**From:** William Nywening [mailto: [REDACTED]]  
**Sent:** January-03-17 4:25 PM  
**To:** Tomek, Evan  
**Cc:** 'Donna Clermont' ([mailto: [REDACTED]]); [mailto: [REDACTED]]; Corrine Nauta; Brianne Wallace; Arpino, Marianna  
**Subject:** RE: Union Gas 2017 Storage Enhancement Project

Hello Evan and Marianna,

The Township of Dawn-Euphemia was interested in knowing the status of this project as they had commented that they wished to have a road use agreement in effect and their road superintendent has not been contacted to date.

Thanks,

Will Nywening

**From:** Tomek, Evan [mailto: [REDACTED]]  
**Sent:** October-17-16 3:05 PM  
**To:** William Nywening  
**Cc:** Donna Clermont ([mailto: [REDACTED]]); [mailto: [REDACTED]]; Corrine Nauta; Brianne Wallace  
**Subject:** RE: Union Gas 2017 Storage Enhancement Project



Hi Will,

Thank you for your review of the 2017 Storage Enhancement Project Environmental Protection Plan and for your response below.

I have forwarded your response to the Project Manager to ensure your concerns/requirements are addressed prior to and during construction.

Please feel free to contact me if you have any questions in the meantime.

Thanks again,

Evan Tomek, BES  
Environmental Planner on behalf of  
Union Gas Limited | A Spectra Energy Company



email: [REDACTED]

**From:** William Nywening [mailto:[REDACTED]]  
**Sent:** October-17-16 2:31 PM  
**To:** Tomek, Evan  
**Cc:** Donna Clermont ([REDACTED]); [REDACTED]; Corrine Nauta; Brianne Wallace  
**Subject:** Union Gas 2017 Storage Enhancement Project

Dear Mr. Tomek,

Thank-you for providing the County of Lambton and the Township of Dawn-Euphemia with a copy of the Environmental Protection Plan for the 2017 Storage Enhancement Project within former Dawn Township. The County Planning and Development Services Department provides planning advisory services to the Township. The Township has asked that I advise you that Township Council passed the following resolution:

*That Council receives the Environmental Protection Plan Re: 2017 Storage Enhancement Project, as prepared and submitted by Union Gas Limited; And further that Council requests Union Gas Limited to enter in to a Road Use Agreement for road use/remediation purposes.*

As per the resolution, the Township's main concern is with respect to Township roads and ensuring any damage resulting from construction traffic is remediated. Typically a survey and photographic record of road conditions is required before construction commences and roads must be restored to equal or better condition following construction. You can contact Paul Dalton, the public works supervisor with the Township in this respect [REDACTED] or [REDACTED]. From the drawings provided, it appears that there will be buildings associated with the drilling operations that will require building permits despite their being temporary. You can contact the County Building Services Department [REDACTED] in this respect. The Township has agreed it will not require any site plan approval for these buildings provided its concerns with respect to road use can be addressed. If you have any questions, do not hesitate to contact me. Please confirm receipt of this email. Thanks,

**Will Nywening**, BA Urban Development  
County of Lambton Planning & Development Services

Planner

County of Lambton Office  
789 Broadway St, Box 3000  
Wyoming, ON N0N 1T0  
phone: [REDACTED]  
toll free: [REDACTED]  
fax: [REDACTED]

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**Tomek, Evan**

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**From:** Muller, Joseph (MTCS) [REDACTED]  
**Sent:** December-02-16 2:56 PM  
**To:** [REDACTED]  
**Cc:** Tomek, Evan  
**Subject:** 2017 Storage Enhancement Project

Hello Zora Crnojacki:

I have reviewed the above Environmental Protection Plan report and related correspondence for the above project, and understand that no built heritage or cultural heritage landscapes were identified as being impacted, and the archaeological assessment likewise did not identify any resources within the project area. Based on the documentation provided, the Heritage Program Unit at the Ministry of Tourism, Culture and Sport has no further comments on this project, other than the usual caveats about deeply buried artifacts or remains. Thank-you for your assistance,

Joe

Joseph Muller, RPP, MCIP

Heritage Planner  
Ministry of Tourism, Culture and Sport  
Culture Division | Programs and Services Branch | Heritage Program Unit

401 Bay Street, Suite 1700  
Toronto, Ontario M7A 0A7

[REDACTED]



UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Evidence, pages 17-19 “First Nations and Metis Consultation”

Union sent notifications of the Project on May 9, 2016 to Chiefs of Chippewa of the Thames First Nation, Caldwell First Nation, Aamjiwnaang First Nation, Walpole Island First Nation, and Kettle and Stoney Point First Nation.

Union met with Aamjiwaang First Nation on July 5, 2016. Aamjiwaang First Nation requested and was provided with copies of the Risk Analysis Report and an update presentation on Union’s Emergency procedures. The Chippewa of the Thames First Nation requested a meeting with Union but the evidence does not say if the meeting took place. Union stated that as of the date of application filing, no concerns or issues have been raised by these communities.

- a) How did Union ensure that the list of potentially affected Indigenous communities was complete? Which sources of information did Union use, and which agencies or ministries were contacted for this purpose?
- b) After Union sent initial notification of the Project on May 9, 2016, did Union receive any response communication from the Indigenous communities? If so, please discuss and file copies of written communication or summaries of verbal conversations. If there was no further communication, did Union follow up with any of the communities to ensure the notification was received?
- c) Please provide any comments by the consulted Indigenous Communities and Union’s replies since the date Union filed the application with the OEB.

---

**Response:**

- a) Union has an extensive data base and knowledge of First Nations and Métis organizations in Ontario and consults with the Tribal organizations and the data bases of the Ministry of Natural Resources, Ministry of Indigenous Relations and Reconciliation, Indigenous and Northern Development Affairs Canada to ensure consultation is carried out with the most appropriate groups.

Union has the knowledge and experience of working with First Nations in this area as demonstrated by the Panhandle Reinforcement Project, Panhandle replacement projects in 2015 & 2016, Panhandle Relocation for the Detroit River International Crossing project,

the Bluewater Crossing project, Sarnia Expansion, Dawn Plant Expansion where all of these projects required in-depth consultations with these First Nations.

- b) Aamjiwnaang First Nation responded and requested a consultation. A consultation took place July 5, 2016 with Aamjiwnaang's Environmental Committee and Unions Manager of Indigenous Affairs, Manager of Underground Storage and the Principle Reservoir Engineer. No issues or concerns raised and Union has committed to any ongoing communication during the project.

Chippewa of the Thames First Nation requested a consultation. A consultation took place October 6, 2016 with the Chippewas of the Thames Land Consultation Committee and Unions Manager of Indigenous Affairs, Manager of Underground Storage and the Principle Reservoir Engineer. No issues or concerns raised and Union has committed to any ongoing communication during the project.

Per phone call with Jared Macbeth, Project Review Coordinator for Walpole Island First Nation on May 17, 2016 explained project and no issues but requested a formal consultation at a date to be arranged. On November 9, 2016 and December 8, 2016 spoke of this project while meeting with Jared on other business. He raised no issues or concerns and we have decided to set a meeting that worked with our schedules in late January. Union met on February 2, 2017 with Jarod Macbeth and Dean Jacobs, Consultation Manger. Communications will continue for the duration of the project.

Per follow up call with Chief Hillier of the Caldwell First Nation October 26, 2016 she had no issues and Union agreed to a formal meeting with her and the Manager of Indigenous Affairs, Manager of Underground Storage and the Principle Reservoir Engineer to discuss. She asked that if Archeology or Environmental monitors are required that we go directly to her to start arrangements. Union agreed. Union will arrange further consultation and as per her schedule and will continue to communicate for the duration of the project.

Per phone call with Lorraine George, CAO of the Kettle and Stony Point First Nation on June 30, 2016 she stated that the Land Manager for the First Nation had left and she was behind on consultations. We spoke of the project and she had no concerns based on our previous projects. She requested that Union contact Diane Thomas in the Lands Management department when/if monitors required for the work. Union agreed. Ms George agreed to contact Union when a new manager was in place. No issues or concerns expected and Union will follow up early February if no response from Ms. George at that point.

- c) The consulted communities have had no issues with the communications put forth by Union. They are fully aware and appreciative of Unions open door policy and the ongoing relationships that have been built with the various Nations. Union is committed to following up and continuing the existing approach to consultation.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Application EB-2016-0322

Union applied for well drilling licences under section 40(1) of the OEB Act. Should the OEB find the applications in the public interest it would issue a favourable report to the Minister of Natural Resources and Forestry recommending issuance of well licences and certain conditions

Please comment on the attached OEB staff proposed conditions of approval. Please note that these conditions are draft and subject to additions or changes.

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

**1. General Requirements**

- 1.1. 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.
- 1.2. 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.
- 1.3. 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.
  - 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.

**4. Project and Communication Requirements**

- 4.1 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.
- 4.2 Union shall designate one of its employees as project manager who will be responsible for the fulfilment 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.
- 4.3 The OEB's designated representative for the purpose of these Conditions of Approval shall be the Manager, Supply and Infrastructure.

---

**Response:**

Union can accept the proposed Conditions of Approval.

UNION GAS LIMITED

Answers to Interrogatories from  
Board Staff

Reference: Application EB-2016-0322

Union applied for OEB order for leave to construct facilities under section 90(1) of the OEB Act.

Please comment on the attached OEB staff proposed draft conditions of approval. Please note that these conditions are draft and subject to additions or changes.

**Draft**

**Leave to Construct Conditions of Approval**

**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.
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.

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. 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.

---

**Response:**

Union can accept the proposed Conditions of Approval.



UNION GAS LIMITED

Answers to Interrogatories from  
Hydro One Networks Inc.

- Reference:
- i. “Attached hereto as 2017 Storage Enhancement Project General Location map is showing the general location of the Dawn Valley, 156, and Bentpath storage pools.
  - ii. Figure 1: Proposed Facilities: Dawn 156 Pool Schedule 10
  - iii. Figure 2: Proposed Facilities: Bentpath Pool Schedule 11

Hydro One Distribution has undertaken a high level review of the Union Gas proposed expansion, and requires more information to continue the investigation of the impact to Hydro One equipment in the immediate area of the expansion. Union Gas’ proposed facility expansions near the Dawn plant in Lambton County are immediately next to some of Hydro One’s existing distribution poles in the municipal road allowance.

More specifically, Hydro One’s high-level review of Union Gas’ evidence does not provide Hydro One with any comfort that there is sufficient separation between Hydro One’s distribution poles and Union Gas’ facilities. Hydro One therefore asks Union Gas to identify the physical separation between Hydro One’s poles and Union Gas’ expanded storage pools, deepened/new wells, and new pipeline.

Upon receiving this information, Hydro One will conduct an assessment and determine if the planned separation is adequate. Either Union Gas’ facilities or Hydro One’s assets may need to be relocated to maintain adequate clearances, if the planned separation is inadequate.

---

**Response:**

Please see Attachment 1 which shows a revised Schedule 10 and 11 for the approximate locations of Hydro One wooden distribution poles. The minimum separation between any of Union’s Proposed Facilities and Hydro One’s wooden distribution poles is approximately 40 metres.

Please see Attachment 2 for a photo of the location of minimum separation.










TOWNSHIP OF DAWN-EUPHEMIA

(GEOGRAPHICAL TOWNSHIP OF DAWN)



LEGEND

-  NEW PIPING TO BE INSTALLED
-  EXISTING PIPING
-  PROPOSED NEW WELLS
-  EXISTING WELLS
-  TEMPORARY LAND USE
-  HYDRO POLE

No.	DATE	BY	APP'D	REMARKS
REVISIONS				
<div><b>unigas</b> A Spectra Energy Company</div>				
PROPOSED FACILITIES BENTPATH POOL				
DRAWN BY T. James		DATE 2016/10/15		PLOT SPEC: 1/2500
CHECKED BY		DATE		CAD CODE: M797
APPROVED BY		DATE		FILE REVISION DATE 2016-01-26
SHEET No. 1 OF 1		SYSTEM		DRAWING No. M797 OEB

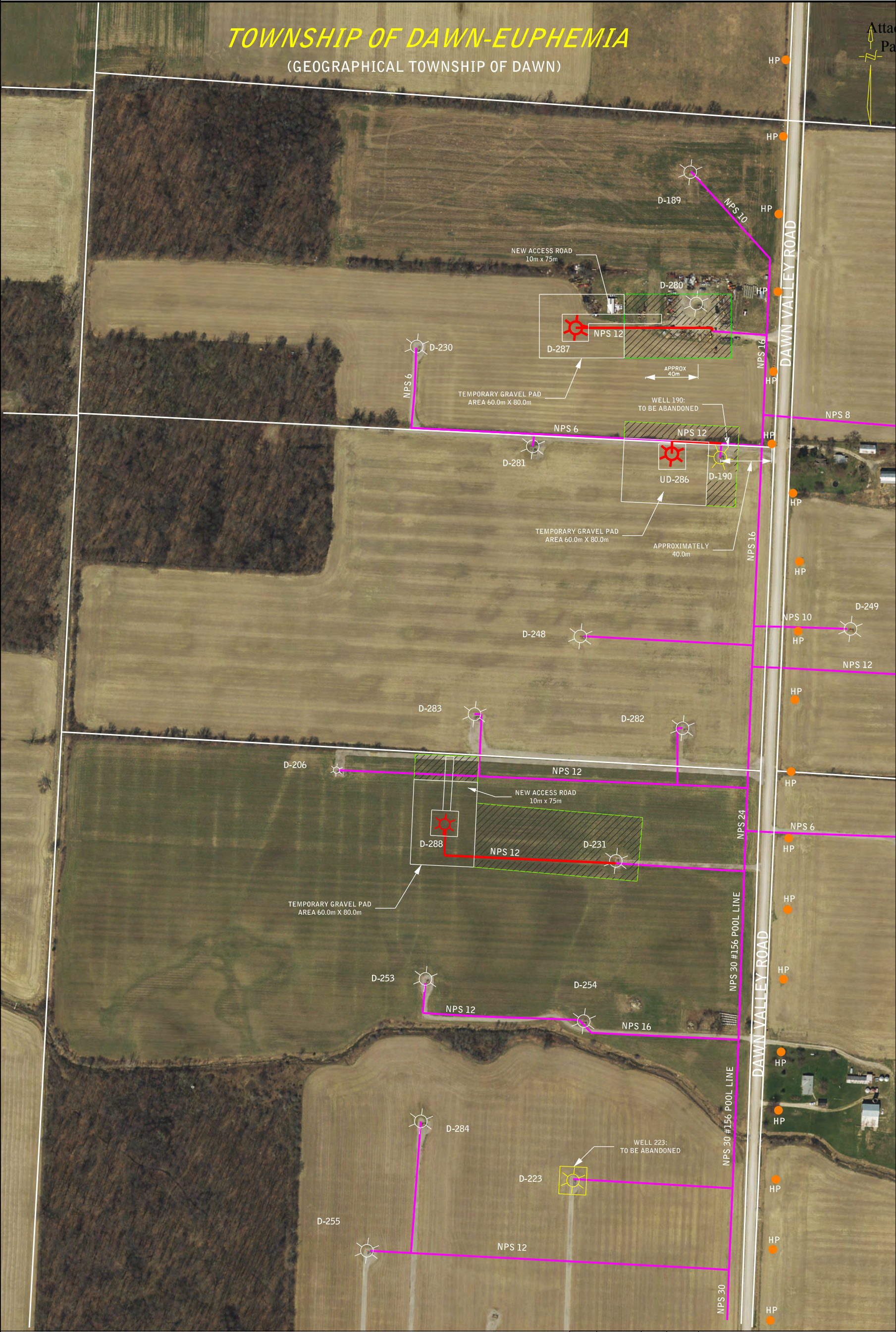


PROPOSED FACILITIES: DAWN 156 POOL

Filed: 2017-02-07  
EB-2016-0322  
HONI.1  
Attachment 1  
Page 2 of 2


TOWNSHIP OF DAWN-EUPHEMIA

(GEOGRAPHICAL TOWNSHIP OF DAWN)



LEGEND

- NEW PIPING TO BE INSTALLED
- EXISTING PIPING
- PROPOSED NEW WELLS
- EXISTING WELLS
- WELLS TO BE ABANDONED
- TEMPORARY LAND USE
- HYDRO POLE

No.	DATE	BY	APP'D	REMARKS
01				
REVISIONS				
<div><div><b>uniongas</b> A Spectra Energy Company</div></div>				
PROPOSED FACILITIES DAWN 156 POOL				
DRAWN BY T. James		DATE 2016/09/21		PLOT SPEC: 1/4000
CHECKED BY		DATE		CAD CODE: PL1476
APPROVED BY		DATE		FILE REVISION DATE 2016-01-26
SHEET No. 1 OF 1		SYSTEM		DRAWING No. PL1476 OEB





UNION GAS LIMITED

Answers to Interrogatories from  
Hydro One Networks Inc.

If Hydro One determines that its distribution poles need to be relocated because of the proposed location of Union Gas' facilities, does Union Gas acknowledge that it will reimburse Hydro One's relocation costs and other related expenditures (e.g. engineering and environmental studies, land rights, etc.) incurred as a result?

---

**Response:**

With a minimum separation distance of approximately 40 metres, relocation is not required.

UNION GAS LIMITED

Answers to Interrogatories from  
The Ministry of Natural Resources and Forestry

Reference: Evidence, pages 5-6, 7-10, paragraphs 19-23, 28-42

Union Gas is proposing to delta pressure and increase the maximum operating pressure of the Dawn 156 pool. The applicant seeks to vary the approval that was granted to it in the EB-2007-0633 proceeding to effectively increase the pressure gradient to 17.2 kPa/m (0.76 psi/ft.).

1. Please comment on the adequacy of the cap rock to withstand the higher pressure proposed.
2. Are there any public safety or environmental concerns resulting from the increased pressure?
3. Please comment on these concerns and how they have been mitigated.

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**Response:**

1. In order to determine the adequacy of the caprock to withstand the proposed higher pressure Union has conducted tests on the reservoir and caprock of the Dawn 156 Pool. These tests were conducted to determine the threshold pressure, geomechanical strengths and in-situ stresses. Additionally, micro fracture tests were completed on the caprock of the Dawn 156 Pool. Union retained Geofirma Engineering Ltd. to complete an engineering study of the Dawn 156 Pool. Geofirma analyzed the various test data provided by Union and completed a geomechanical 3D model of the pool to determine the maximum safe operating pressure. Based on their analysis Geofirma confirmed that the maximum safe operating pressure exceeds the proposed 17.2 kPa/m (0.76 psi/ft.).
2. The engineering study completed by Geofirma concludes there are no safety concerns with increasing the pressure in the Dawn 156 Pool. In addition, Union has completed a "What If" Analysis of Hazards and Operability Issues Report (HAZOP) and an assessment of the neighbour activities as required by CSA Z341. As part of the project Union is proposing to complete the following work prior to the increasing the pressure in the Dawn 156 Pool:
  - The abandonment of two wells
  - Workovers on 24 existing wells;
  - New wellheads on 18 wells; and
  - The installation of Emergency Shutdown Valves on all I/W wells

Based upon the studies completed and the completion of the proposed work Union is satisfied the increase in pressure will not result in any safety or environmental concerns.

3. The abandonment of the two wells in the Dawn 156 Pool is being completed based on the analysis completed by Geofirma as part of the engineering study. The identified work as outlined in Part 2 of this response is required to safely increase the pressure in the Dawn 156 Pool.