



EB-2011-0013
EB-2011-0014
EB-2011-0015

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B; and in particular sections 36.1(1), 38(1), 40(1), 90(1), thereof;

AND IN THE MATTER OF an application by Union Gas Limited for an Order designating the area known as the Jacob Pool, in the Municipality of Chatham-Kent, as a gas storage area;

AND IN THE MATTER OF an application by Union Gas Limited for authority to inject gas into, store gas in and remove gas from the areas designated as the Jacob Pool and to enter into and upon the lands in the said areas and use the said lands for such purposes;

AND IN THE MATTER OF an application by Union Gas Limited to the Ministry of Natural Resources for a license to drill wells in the said areas;

AND IN THE MATTER OF an application by Union Gas Limited for an Order granting leave to construct natural gas pipelines in the Municipality of Chatham-Kent.

BEFORE: Marika Hare
Presiding Member

DECISION WITH REASONS

July 19, 2011

OVERVIEW

On January 17, 2011 Union Gas Limited (“Union” or the “Applicant”) filed three applications with the Ontario Energy Board (the “Board”) under sections 36.1(1), 38(1), 40(1) and 90(1) of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B (the “Act”). Union applied for the following:

1. Designation of the proposed Jacob Gas Storage Pool (the “Jacob Pool”) and authority to operate the Jacob Pool, pursuant to section 36.1(1) and subsection 38(1) of the Act, respectively. This application was assigned Board File No. EB-2011-0013;
2. Leave to construct a transmission pipeline, pursuant to section 90 of the Act, to connect the proposed Jacob Pool with the Dover Transmission Station on Union’s Panhandle System; and various gathering pipelines to connect wells to a proposed compression station. This application was assigned Board File No. EB-2011-0014; and
3. Licences to drill three injection/withdrawal wells in the proposed Jacob Pool, pursuant to section 40 of the Act. This application was assigned Board File No. EB-2011-0015.

Board approval of these applications would allow Union to develop and operate the Jacob Pool which is located in the geographic area of the Municipality of Chatham-Kent.

The Jacob Pool has approximately 2.45 billion cubic feet of storage capacity which will be added to Union’s storage portfolio. The planned in-service date is July 1, 2012. This incremental storage capacity will be part of Union’s unregulated storage business and the project development and operation cost will be paid for by Union’s shareholders. Union’s ratepayers will incur no additional costs as a result of this storage project.

INTRODUCTION

The Applications

Application to Designate and Authority to Operate Jacob Pool (EB-2011-0013)

Union applied for an order designating the geographic formation referred to as the Jacob Pool located in the Municipality of Chatham-Kent, in the Province of Ontario, being composed of part of Lots 4, 5, 6 and 7, Concession 4, part of the road allowance between Lots 5 and 6, Concession 4 and part of the road allowance between Concession 4 and 5 as a storage area. The Jacob Pool is a depleted natural gas reservoir located north of the Thames River and approximately 10 kilometres west of Chatham, Ontario.

Pursuant to subsection 38 (1) of the Act, Union has also asked for authority to inject gas into, store gas in and remove gas from the Jacob Pool, and enter into and upon lands in the area for such purposes.

Application for Leave to Construct Natural Gas Pipelines (EB-2011-0014)

Union applied for an order granting leave to construct 4,712 metres of NPS 8 transmission pipeline to connect the proposed storage area with Union's Dover Transmission Station; and construction of 1,829 metres of NPS 6 and 8 gathering pipelines to connect wells to a proposed compressor station. The compressor station will be required to operate the Jacob Pool. It will consist of all the necessary piping and valves to direct gas flow and is proposed for the corner of Maple Line and Jacob Road. In addition, a valve site will also be required within the Dover Transmission Station to connect the transmission line to the Panhandle system.

Application for licences to Drill Three Wells (EB-2011-0015)

Union has requested that the Board issue a favourable report under subsection 40(1) of the Act, to the Minister of Natural Resources ("MNR") to whom Union has applied for licences to drill three (3) injection/withdrawal wells within the proposed Jacob Pool. By letter dated February 1, 2011, the MNR, Petroleum Resources Centre, referred to the Board applications by Union for licences to drill the following wells within the proposed

designated storage area:

- Pain Court 2 (Horiz.#1), Dover 3-6-IV
- Pain Court 2 (Horiz.#1, Lat.#1), Dover 3-6-IV
- Pain Court 3 (Horiz.#1), Dover 3-6-IV

A map showing the location of the Jacob Pool, the associated wells and pipelines is attached as Appendix "B" to this Decision.

For the reasons outlined below the Board finds that the development of the proposed Jacob Pool is in the public interest. The Board's order approving the designation of the Jacob Pool and authorizing Union to inject gas into, store gas in and remove gas from the Jacob Pool is attached as Appendix "C" to this decision. The Board's order granting leave to construct the proposed pipelines is attached as Appendix "D" to this Decision. The Report of the Board to the MNR regarding the well drilling licences is attached as Appendix "E" to this decision.

THE PROCEEDING

The Board determined that it would hear all three applications together. A Notice of Application with respect to all three matters was issued on March 7, 2011. The Ministry of Natural Resources, Enbridge Gas Distribution Inc. ("Enbridge"), the Kent Federation of Agriculture ("KFA") and Invenergy Canada ("Invenergy") intervened in the proceeding. The KFA was the only intervenor who requested and was granted cost award eligibility status in this proceeding.

On March 29, 2011 the Board issued Procedural Order No. 1 which set the schedule for a written proceeding including a provision for intervenors to file evidence. The Board ordered that "the scope of this proceeding will be limited to the Issues List" attached to Procedural Order No. 1.

On April 11, 2011 the KFA filed intervenor evidence concerning landowner compensation issues which, it submitted, was appropriately within the umbrella of Issue 1.3 of the Board's Issues List which addressed the necessary lease agreements with affected landowners. On April 14, 2011 Union filed a Notice of Motion regarding the KFA proposed evidence (the "Motion"). The Motion asked for an order of the Board striking the KFA evidence from this proceeding on the grounds that the KFA evidence "is not relevant to the issues in this proceeding".

On April 19, 2011 the Board issued Procedural Order No. 2 which set the schedule for submissions and reply submissions from the parties with respect to the Motion and the issue of whether the KFA evidence should be struck from the record in this proceeding.

The KFA, Board Staff and Union filed submissions on Union's Motion. On May 3, 2011 by way of Procedural Order No. 3 and the Decision on the Motion the Board granted the Motion for an order striking the evidence filed by the KFA on April 11, 2011.

Written interrogatories were filed by the intervenors and Board staff on May 16, 2011 and Union responded to all the interrogatories on May 25, 2011.

On June 2, 2011 a Technical Conference was held at the Board offices with participation of Union, Enbridge, Board staff and the MNR. The KFA and Invenergy informed the Board that they would not attend. On June 10, 2011 Board Staff and the MNR filed submissions. The KFA filed its submissions on June 13, 2011. On June 16, 2011 Union filed a reply argument and this completed the record of the proceeding.

Upon review of the evidence the Board approves Union's applications, with Conditions of Approval, on the basis that they are in the public interest.

The Proposed Facilities

The proposed facilities include the drilling of three injection/withdrawal ("I/W") wells and the conversion of other wells for which Union already has licences, specifically: converting the existing stratigraphic test well, Pain Court 1 (Horiz. # 1) ("PC 1"), drilled in 2010 to an I/W well; converting one existing well to an I/W well; and converting two existing wells to observation wells.

In addition to the construction of 4,712 metres of NPS 8 transmission pipeline and 1,829 metres of NPS 6 and NPS 8 gathering pipelines, Union will undertake modifications at the existing Dover Transmission Station to tie into the Panhandle System and to construct a new compressor and metering station at the corner of Maple Line and Jacob Road.

Union will be the owner, operator and developer of the Jacob Pool and related storage facilities. Operation of the Jacob Pool is scheduled to begin by August 3, 2012. In

order to meet this in-service date, Union plans to begin well drilling on January 9, 2012 and to commence pipeline construction in April, 2012.

Regulatory Framework for Gas Storage Development in Ontario

For the benefit of all parties, this Decision first sets out the regulatory framework for gas storage development in Ontario.

In this proceeding the Board can exercise its authority under sections 36.1(1), 38(1) and 40(1), of the Act to designate a gas storage area, to issue authorization to operate the designated storage area (“DSA”) and to issue a report to the MNR on an application for storage well drilling licences.

The MNR’s role in the approval and oversight of development and operations of the gas storage pools in Ontario is defined by the *Oil, Salt and Gas Resources Act*, R.S.O. 1990, Chapter P.12 (“OSGRA”). The MNR is responsible for the technical and safety aspects of storage pool development and operation in accordance with the requirements of *CSA Z341.1 “Storage of Hydrocarbons in Underground Formations”* (“CSA Z341.1”)¹ and the *Gas and Salt Resources of Ontario, Provincial Operating Standards, Version 2.0* (the “Provincial Standards”). CSA Z341.1 and the Provincial Standards provide a comprehensive framework for monitoring storage operations in Ontario.

In its review of technical and safety aspects of gas storage development and operation applications the Board relies on the MNR’s processes for ensuring that applicants are compliant with its requirements. The Board’s standard conditions of approval under section 38(1) and under section 40(1) clearly state that the applicant shall conform with CSA Z341.1, the OSGRA, and the Provincial Operating Standard to the satisfaction of the MNR.

The Act provides the Board with the following mandate with respect to the designation of a gas storage area:

- 36.1 (1) The Board may by order,
- (a) *designate an area as a gas storage area for the purposes of this Act;*
 - or
 - (b) *amend or revoke a designation made under clause (a).*

¹ The current edition of the CSA Z341 is to be followed and this is the assumption throughout this document.

Pursuant to section 38(1) of the Act, the Board may issue an order for authorization to inject gas into, store gas in and remove gas from a DSA. Section 38(1) of the Act reads:

38. (1) The Board by order may authorize a person to inject gas into, store gas in and remove gas from a designated gas storage area, and to enter into and upon the land in the area and use the land for that purpose.

An order under section 38(1) of the Act authorizes a prospective storage operator to operate the designated storage pool. This order is an authorization that will allow the Applicant to operate the storage pool once the pool is designated.

Subsections 38 (2) and 38(3) of the Act deal with the compensation rights and determination of amount of compensation to the owners of land and storage and related rights:

Right to compensation

- (2) Subject to any agreement with respect thereto, the person authorized by an order under subsection (1),*
- (a) shall make to the owners of any gas or oil rights or of any right to store gas in the area just and equitable compensation in respect of the gas or oil rights or the right to store gas; and*
- (b) shall make to the owner of any land in the area just and equitable compensation for any damage necessarily resulting from the exercise of the authority given by the order. 1998, c.15, Sched. B, s. 38 (2).*

Determination of amount of compensation

- (3) No action or other proceeding lies in respect of compensation payable under this section and, failing agreement, the amount shall be determined by the Board. 1998, c. 15, Sched. B, s. 38 (3).*

This proceeding does not include any application under subsection 38(3). However, subsection 38(2) obliges the Applicant to make just and equitable compensation for storage rights and for damages resulting from operation of a gas storage pool.

Under section 40 of the Act, upon referral by the MNR of an application to drill a well in a designated storage area, the Board shall issue a report to the Minister regarding an application for the granting of a licence relating to a well in a gas storage area. The report of the Board is binding on the Minister and, if it is a favourable report recommending that the application be granted, then the licence will be issued. Section

40 of the Act states:

40. (1) *The Minister of Natural Resources shall refer to the Board every application for the granting of a licence relating to a well in a designated gas storage area, and the Board shall report to the Minister of Natural Resources on it.*
- (2) *The Board may hold a hearing before reporting to the Minister if the applicant does not have authority to store gas in the area or, in the Board's opinion; the special circumstances of the case require a hearing.*
- (3) *The Board shall send to each of the parties a copy of its report to the Minister made under subsection (1) within 10 days after submitting it to the Minister and such report shall be deemed to be an order of the Board within the meaning of section 34.*
- (4) *The Minister of Natural Resources shall grant or refuse to grant the licence in accordance with the report.*

The MNR's authority regarding well licences is set in the OSGRA section 10 as follows:

10. (1) No person shall drill, operate, deepen, alter or enter a well, or engage in any other activity on or in a well, except in accordance with a licence. The OSGRA definition of "well" includes production wells, storage wells and other wells.

Under Ontario Regulation 245/97 "Exploration, Drilling and Production" of the OSGRA, the requirements for the well licences are specified in more detail.

The MNR is responsible for ensuring that the Provincial Standards, including those related to the operation of wells, well plugging, and the reporting and monitoring of various stages of storage operations, are implemented by storage operators.

DESIGNATION OF GAS STORAGE AREA

The Board considered the following issues with respect to the application for designation of the Jacob Pool as a gas storage area:

1. Is the underlying geological formation appropriate for storage operations?
2. Is the tract of land to be designated appropriately bound and sized to provide for safe operation of the storage pool?
3. Does the applicant have the necessary leases and agreements with the directly affected landowners?
4. Is there a need for this incremental storage capacity in Ontario?

Is the underlying geological formation appropriate for storage operations?

Evidence

The Jacob Pool was discovered in 1985 at a discovery pressure of 8,026 kPa. It is an Ordovician hydrothermal dolomite reservoir approximately 870 metres deep and is a depleted Trenton gas reservoir. Between January, 1988 to September, 2010 it has produced 66,461 10^3 m^3 of gas. The proposed working capacity for the pool is 69,400 10^3 m^3 or 2.45 billion cubic feet.

The Jacob Pool is geologically different from Union's other gas storage pools as it is a hydrothermal dolomite reservoir while the other storage pools have a typical pinnacle reef geology. The caprock above the reservoir is an impervious shale layer whereas in the majority of Union's pinnacle reef pools the caprock is an impervious anhydrite layer which protects the integrity of the proposed storage pool.

In August 2010, Union drilled a horizontal stratigraphic test well PC 1, to evaluate the Jacob Pool reservoir potential for conversion to storage. The PC 1 well was drilled to a total measured depth of 1903.0 metres. A caprock core was retrieved from the lower portion of the Blue Mountain shale from 903.0 to 911.6 metres measured depth. Results from PC 1 caprock tests were used to refine the geological and geophysical interpretations of the potential for storage. The tests showed a low permeability of the caprock core which is an advantage for a caprock geology. The Blue Mountain shale and the Queenston shale above this reservoir is over 225 metres thick.

The Jacob Pool lies completely within the Trenton group and includes three formations: the Cobourg, the Sherman Fall, and the Kirkfield formation. Union will be storing gas in the Trenton reservoir. Directly below the Trenton is the Black River Group ("Black River"), which currently produces oil and gas. Liberty Torque, which is the current

production operator, will continue to produce oil and gas from the Black River underlying the proposed storage zone.

Union stated that there is isolation of the Black River production zone below the storage zone and that there is no communication between the Trenton and Black River zones.

Union submitted that the Jacob Pool will be designed, constructed, and operated in accordance with CSA Z341. In accordance with clause 7.1 of the CSA Z341 a risk assessment was completed as part of the project. It consists of a comprehensive review of all the construction and operations associated with the project, and a report that was submitted to the MNR in January of 2011 for review. Union stated that this report satisfies all the requirements of the CSA Z341, specifically Section 7.1. In addition, a report on assessment and neighbouring activities was completed for the Jacob Pool. Reservoir integrity has been established and tested.

Board staff and MNR indicated in their submissions that they had no outstanding concerns with respect to the geological formation being appropriate for storage operations.

Findings

Union presented a comprehensive geological analysis of the formations which compose the Jacob Pool. Given this geological evidence, the results of the rock cap testing and Union commitment to design, construct and operate the Jacob Pool in accordance with the CSA standards, the Board finds that the underlying geology of the Jacob Pool is appropriate for the storage operations.

Is the tract of land to be designated appropriately bound and sized to provide for safe operation of the storage pool?

Evidence

The proposed Jacob Pool designated storage area consists of 273 hectares (675 acres) of surface land in the Municipality of Chatham-Kent. The boundary was determined using 2D and 3D seismic and well controls to the north, west and south of the pool. Union considered the MNR's Drilling Tracks and discussed the proposed DSA boundary with the MNR.

The proposed boundary follows the MNR's Drilling Tracts boundaries without severing the tracts. Union submitted that keeping the drilling tracts whole protects the DSA from third party drilling and other subsurface activities, while at the same time retaining as much land as possible for future oil and gas exploration and drilling. Additional lands to the north, south and east were included in the proposed DSA to adequately protect the storage reservoir.

The proposed DSA was confirmed with MNR staff. The "Record of Technical Data Reviewed for a Proposed Designated Gas Storage Area" is included in the pre-filed evidence and signed by MNR staff demonstrating the MNR's agreement with the proposed boundary.

Board staff also supported the proposed boundary for the Jacob Pool.

Findings

The Board finds that the tract of land to be designated is appropriately bound and sized to provide safe operation of the Jacob Storage Pool. The DSA represents a reasonable balance between the protection of the storage reservoir from other subsurface activities and the retention of as much land as possible for future oil and gas exploration and drilling.

The finding is based on the pre-filed evidence which conforms to the MNR administered standards and regulatory requirements. Further, the Board notes that the MNR has reviewed and accepted the proposed boundaries. A description of the lands to be designated is included as Schedule 1 to this Decision and Order.

Does the applicant have the necessary leases and agreements with the directly affected landowners?

Evidence

The pre-filed evidence indicates that Union holds all Petroleum and Natural Gas (P&NG) rights and storage rights leases for all directly affected private properties in the Jacob Pool DSA.

Union has letters of acknowledgment from the landowners for all the well locations and access roads as required for the construction of facilities in the Jacob Pool. With regard to compensation to the landowners, Union stated that it would offer standard increased

compensation packages to all the Jacob Pool landowners at least 30 days prior to the first injection as set in the gas storage leases. When asked about this by Board Staff at the technical conference Union confirmed that this compensation package was included in the gas storage leases being offered and that the leases also contained clauses which allowed compensation issues to be addressed by the Board in the event that any landowners do not accept it.

Union explained that its compensation package is consistent with Union's existing Gas Storage Landowner Compensation Program and standard Lambton County storage rates.

Payment for P&NG and Gas Storage Agreement rentals, well and roadway payments will be made at the standard Lambton County storage rates. The combined P&NG and Gas Storage Lease rentals will be \$115.68 per acre. The offer for wells is \$1,313.37 per well and outside acreage is \$ 34.73 per acre.

Union's evidence demonstrated that Union's intention is to offer and pay the same compensation package to all the landowners within the Jacob Pool regardless of the status of agreement.

Union further submitted that it is committed to implement a lands relation program when construction starts in order to facilitate meaningful engagement with the community. To date, Union has stated that there have not been any significant issues identified by directly affected landowners during negotiations with Union.

The KFA did comment on compensation issues. KFA submitted that the landowner compensation procedure under the Act is unfair and that the Board should not remain a passive overseer of compensation levels in storage operations but should define fair and just compensation. Union pointed out that as the Board noted in Procedural Order No. 3, the KFA is not a landowner and as such cannot be deemed to have a direct interest in compensation matters that arise from the operation of a designated gas storage pool. Union also confirmed that its pre-filed evidence includes leases with all directly affected landowners and that no landowner claimed that it has not agreed to the lease or that the lease is unfair.

Findings

The Board is satisfied that Union holds the necessary P&NG and storage rights

agreements for the private properties within the proposed DSA and that the compensation offer extended to Jacob Pool storage landowners will be comparable to Union's standard payments to its other landowners in the Lambton County where most of the storage pools are located.

Is there a need for this incremental storage capacity in Ontario?

Evidence

Union submitted that the need for the proposed project is based on current demand for storage in Ontario, Eastern Canada and the U.S. Northeast markets. Union's position is that the long-term demand for storage exceeds the available supply of storage services and that incremental storage services are needed. Union confirmed that additional storage services associated with the Jacob Pool will be sold ex-franchise at market prices. Union also stated that the ex-franchise storage will not be part of Union's regulated business and that there will be no impact on Union's rate payers. Union emphasized that the Board's Natural Gas Electricity Interface Review ("NGEIR") Decision (EB-2005-0551) supported development of additional gas storage in Ontario. No other parties challenged the need for incremental storage capacity.

Findings

The Board finds that the additional storage capacity provided by the development and operation of the Jacob Pool will help meet the need for the growth in demand for natural gas storage.

AUTHORIZATION TO INJECT, STORE AND WITHDRAW GAS

The Board considered the following issues with respect to Union's section 38 application:

1. Is the applicant a capable prospective storage operator in terms of technical and financial capabilities to develop and operate the proposed storage facilities?
2. Will the appropriate safety requirements for proposed injection/withdrawal activities be ensured in accordance with all relevant codes and standards?
3. Is the proposed maximum operating pressure safe?

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4. What are the potential impacts of injection/withdrawal activities on the integrity of the gas storage pool?

 5. Is the applicant appropriately accountable for losses or damages caused by its activities? In particular, will the appropriate insurance coverage be in effect prior to construction/operation commencement?

Is the applicant a capable prospective storage operator in terms of technical and financial capabilities to develop and operate the proposed storage facilities?

Evidence

Union presented evidence that it had been safely operating storage in Ontario for many years and that Union currently owns and operates 26 storage pools. Both Board staff and the MNR supported Union position.

Findings

Based on Union's operational history as the largest storage operator in Ontario, the Board finds that Union is a capable storage operator both in terms of technical capabilities and financial viability.

Will the appropriate safety requirements for proposed injection/withdrawal activities be ensured in accordance with all relevant codes and standards?

Evidence

Union confirmed its commitment to comply with all applicable laws and regulations regarding the safe operation of the Jacob Pool. In particular Union stated that it would follow the OGSRA and its regulations, the Provincial Operating Standards, CSA Z341.1 and the Emergency Response Plan and Operations and Maintenance Procedures. Board staff and MNR supported Union's position with respect to safe operation of the Jacob Pool.

Findings

The Board finds that the safe operation of the Jacob Pool will be ensured by the Applicant's compliance with all applicable laws, regulations and operating standards. The Board adopts the recommendation of the MNR that all conditions of approval state

that Union should adhere to the requirements of the “latest edition” of the CSA 341. This is reflected in the conditions to the Board Order EB-2011-0013.

What are the potential impacts of injection/withdrawal activities on the integrity of the gas storage pool?

Evidence

Union confirmed that the Jacob Pool Project will be included as part of Union’s “Pipeline and Storage Downhole Integrity Management Programs”. The integrity of a storage pool is to be ensured by the Applicant adhering to the requirements set out in CSA Z 341.1 through completion of casing inspection logs².

The MNR stated in its written submissions, that, to ensure that current standards are followed, all the Board’s conditions of approval that refer to CSA Z341 should specify that it should be the “latest edition” that Union would be required to follow. This applies to conditions of approval under section 38(2) and conditions attached to the Board’s Report to the MNR under section 40 of the OEB Act regarding approval of well drilling licence applications.

Findings

The Board finds that there will be no adverse potential impacts of Union’s operation of the Jacob Pool on the integrity of the pool. The Board based these findings on the evidence that demonstrates that Union will comply with the requirements of the CSA Z341.1 to the satisfaction of the MNR.

Is the proposed maximum operating pressure safe?

Evidence

The discovery pressure of the pool was 8,026 kPa. Union intends to operate the pool above the discovery pressure at the maximum operating pressure of 10,280 kPa.

² Casing inspection log – a log or combination of logs that:

- (a) determines the depth of penetration of anomalies into the well casing;
- (b) distinguishes between external and internal corrosion; and
- (c) detects holes, pits, perforations, metal loss and metal thickness

Union proposes to delta pressure³ the Jacob Pool in two stages. In the first year of operation it will be pressured halfway between the ultimate delta-pressure and the initial discovery pressure of the reservoir. In the second year of operation the operating pressure will be increased to 10,280 kPa...

More specifically, the Jacob Pool will be operated between a minimum pressure of 2,170 kPa and a planned maximum operating pressure in Year 1 of 9,150 kPa and in Year 2 of 10,280 kPa.

Board staff proposed a condition of approval that provides for the maximum operating pressure that Union would be allowed to operate the Jacob Pool without seeking leave of the Board. Board staff proposed the following wording:

- 1.5 Union shall not operate the Jacob Storage Pool above a maximum allowed operating pressure representing a pressure gradient of 15.8 kPa/m of depth to the top of the reservoir until leave of the Board is obtained.

In the Technical Conference Union explained that it planned to operate the pool at a maximum operating pressure at 11.85 kilopascals (kPa) per metre as the surface facilities design would not allow higher pressure. The MNR asked if Union would accept a condition of approval that would not allow any increase of operating pressure above 11.85 kPa per metre depth without leave from the Board. Union agreed with the proposal by the MNR. Board staff also agreed with 11.85 kPa per metre being a maximum operating pressure set in the condition 1.5.

Findings

The Board finds that the proposed maximum operating pressure of 10,280 kPa is safe and acceptable and in accordance with the CSA Z431.1 subject to Condition 1.5. The Board finds Union's planned staged delta pressuring program is acceptable, subject to condition of approval 1.5:

- 1.5 Union shall not operate the Jacob Storage Pool above a maximum allowed operating pressure representing a pressure gradient of 11.85

³ Delta pressure – the operating pressure of a reservoir storage facility that is higher than the original or discovery pressure of the reservoir

kPa/m of depth to the top of the reservoir until leave of the Board is obtained.

Is the applicant appropriately accountable for losses or damages caused by its activities? In particular, will the appropriate insurance coverage be in effect prior to construction/operation commencement?

Evidence

Union's evidence is that the insurance coverage for the Jacob Pool project will be incorporated into Union's existing insurance policies. Union confirmed that it does not intend to have a separate policy that would cover only the Jacob Pool. Union's insurance group continuously reviews the coverage required for Union's operations and adjusts the coverage as required. Board staff proposed Condition 1.8 to address the requirements for adequate insurance coverage for environmental and other risks and potential impacts of Jacob Pool operation:

- 1.8 Union shall, after the date on which the Board grants an order pursuant to Section 38(1) of the *Ontario Energy Board Act, 1998* ("the Act") and before commencement of drilling operations or pipeline construction to use the Designated Storage Area ("DSA") for storage, and thereafter while the DSA or any part thereof is being used for storage operations, obtain and maintain in full force and effect insurance coverage, including but not limited to, liability and pollution coverage, in the amount that is determined to be adequate by an independent party with expertise in adequacy of insurance coverage for environmental and other risks and potential impacts of gas storage operations in southwestern Ontario. Union shall file with the Board documentation proving that the insurance coverage has been obtained as required by this condition.

In the Technical Conference and in response to a Board staff interrogatory, Union indicated that it generally accepted the terms outlined in the proposed Condition 1.8 however Union stated that it may not be necessary to have the amount of coverage determined by an independent party. Union indicated that the current amount of coverage it currently has in place should be considered adequate because Union is a long standing storage operator that already has developed its insurance coverage to ensure adequate coverage is available to address the liability and environmental concerns. Union proposed revised wording to the condition 1.8 which deleted reference to having an independent party determine the appropriate amount of insurance. Board

staff supported the proposed wording change.

Findings

The Board finds that Union is committed to having the appropriate insurance coverage in effect prior to Jacob Pool construction/operation commencement. The Board will impose a condition of approval in its order under s. 38(1) as suggested by Union to ensure that Union will obtain and maintain the appropriate insurance coverage:

- 1.8 After the date on which the Board grants an order pursuant to Section 38(1) of the Ontario Energy Board Act, 1998 and before commencement of drilling operations or pipeline construction to use the DSA for storage, and thereafter while the DSA or any part thereof is being used for storage operations, Union shall obtain and maintain in full force and effect insurance coverage for its operations at the Jacob Pool including, but not limited to, liability and pollution coverage. Union shall notify the Board once insurance coverage has been obtained for the Jacob Pool in accordance with this condition.

LEAVE TO CONSTRUCT THE PROPOSED PIPELINES

The Board considered the following issues with respect to the leave to construct application:

1. Is there a need for the proposed pipelines?
2. Are there any undue negative rate implications for Union's rate payers caused by the construction and operation of the proposed pipelines?
3. What are the environmental impacts associated with construction of the proposed pipelines and are they acceptable?
4. Are there any outstanding landowner matters for the proposed pipelines routing and construction?
5. Are the pipelines designed in accordance with the current technical and safety requirements?

Is there a need for the proposed pipelines?

Evidence

The pipeline facilities are an integral part of the development of the Jacob Pool. To enable the proper operation of the Jacob Pool Union has proposed that both transmission and gathering pipelines and this is directly related to the need for development of additional storage within the Province.

Findings

The Board is satisfied that the need for the proposed pipelines is supported by Union's evidence and that the need to construct all the facilities required to develop the Jacob Pool and provide storage services to satisfy the short-term and long-term demand of the ex-franchise market has been demonstrated.

Are there any undue negative rate implications for Union rate-payers caused by the construction and operation of the proposed pipelines?

Evidence

Union has indicated that the project is funded by its shareholders and will not be part of the regulated rate base. Union's evidence did not address the economic feasibility of the project and construction cost estimates. Union confirmed that the cost for the construction of the Pipeline Project is outside of the Cost of Service and/or IRM applications of the regulated utility and in accordance with the Board's NGEIR Decision EB-2005-0551).

Board staff noted that, according to the NGEIR Decision, Union is required to functionally separate its regulated and unregulated storage operations. In written submissions, dated June 10, 2011, Board staff, among other conditions, proposed Condition 1.5 which requires Union to file a Post Construction Financial Report which would indicate the actual capital costs of the Jacob Pool project and an explanation for any significant variances from the estimated costs.

This is set out in Condition 1.5.

- 1.5 Within 15 months of the final in-service date, Union shall file with the Board Secretary a Post Construction Financial Report. The Report shall indicate the actual capital costs of the project and an explanation for any significant variances from the estimated costs.

Board staff submitted, that, for the reason of appropriate accounting transparency between regulated and unregulated storage activities, Condition 1.5 be included in a leave to construct order should the Board approve the application.

Union confirmed that the Jacob Pool project is part of Union's unregulated storage facilities and as such, Condition 1.5 is inappropriate for unregulated projects. Union noted that no other unregulated storage facilities have been required to provide a post construction financial report. Union also submitted that if the Board would require Union to file a Post Construction Financial Report, the report should be kept confidential.

Findings

The Board finds that Union's evidence on the treatment of this unregulated storage project is in accordance with the NGEIR Decision. The Board finds that the facilities have no effect on Union's ratepayers as it is part of Union's unregulated operations and associated costs will not be included in Union's rate base.

This storage will be marketed as a part of Union's overall portfolio and sold ex-franchise at market base rates. All the costs will be incurred by Union's unregulated business, and Union's ratepayers will not incur any rate impacts as a result of the Jacob Pool project.

The Board finds that Condition 1.5 as proposed by Board staff is not necessary as these costs are not part of Union's regulated business.

What are the environmental impacts associated with construction of the proposed pipelines and are they acceptable?

Evidence

An Environmental Report ("ER") was completed by Azimuth Environmental Consulting in January 2011 for the Jacob Pool project. The ER was completed in accordance with the Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2003)⁴.

⁴ The ER was prepared prior to the release of the Board's 2011 6th Edition of the Environmental Guidelines for the Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario.

The ER was provided to the Ontario Pipeline Coordination Committee ("OPCC"), local municipalities, the St. Clair Region Conservation Authority, local First Nations and Métis Nations of Ontario.

Directly affected landowners received a copy of the Executive Summary of the ER and provided with a copy of the ER upon request. Union indicated that no significant concerns have been raised.

The ER outlines a number of environmental mitigation measures that, in conjunction with Union's standard pipeline construction and well drilling specifications, will allow construction of the proposed facilities with minimal environmental impact.

A letter from the Lower Thames Valley Conservation Authority advised Union that the project falls within a source-water protection area. Possible impacts on the source-water protection area have been reviewed by the agencies and the Municipality of Chatham-Kent, and there are no concerns.

To ensure the protection of water wells in the storage pool Board staff proposed wording for a Condition of approval:

- 1.6 Union shall ensure that the construction, operation and maintenance of the Jacob Storage Pool does not affect the quality or supply of potable water. Union shall conduct a water well test prior to and after the first cycle of gas storage and implement a Water Well Monitoring Program. In the event that the quality of the potable water is impacted by the construction, operation and maintenance of the Jacob Storage Pool, Union shall provide adequate fresh water supplies to all affected landowners until the problem is rectified.

Union suggested a modification to the above wording. Union explained, in response to Board staff interrogatories and in the Technical Conference that its hydrogeologist's assessment of the Jacob Pool project resulted in a recommendation to establish a base line water quality and supply conditions by a preconstruction survey. In addition, the recommendation was to monitor wells during the drilling operations. However, the post construction monitoring is recommended to be on a complaint basis only. Union stated that it has taken this approach for its other storage pool projects in the past and has been successful. Based on this approach, Union proposed the following wording:

- 1.6 Union shall ensure that the construction, operation and maintenance of

the Jacob Storage Pool does not affect the quality or supply of potable water. Union shall implement a water well monitoring program to include preconstruction monitoring and to commit to further monitoring should a complaint arise during or following construction. In the event that the quality of the potable water is impacted by the construction, operation and maintenance for the Jacob Storage Pool, Union shall provide adequate fresh water supplies to all affected landowners until the problem is rectified.

Union also received a letter from the Ministry of Tourism and Culture which stated a concern that the ER didn't reflect the new guidelines for assessment of cultural heritage resources. Union submitted that these concerns have been addressed by a new report by archeologists retained by Union.

Findings

The Board finds that the evidence supports Union's claim that it has the appropriate mitigation and restoration measures required to construct the pipelines. The Board notes that the ER was completed in accordance with the Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2003) and that there are no outstanding concerns related to environmental impacts of the proposed pipelines. The Board finds Union's revision to Board staff's proposed condition 1.6 to be acceptable⁵. The Board also notes that Union has addressed the concerns of Ministry of Tourism and Culture with respect to the new guidelines for assessment of cultural heritage resources.

Are there any outstanding landowner matters for the proposed pipelines routing and construction?

Evidence

Union has the signed options for easements required for locating and construction of the transmission pipeline. The options include about 1.47 hectares of permanent easements required for transmission. Union also has letters of acknowledgment signed for all the gathering lines easements, which include approximately 0.5 hectares of permanent easement. Union also has an option to purchase in fee simple for the

⁵ Note this is now condition 1.5 of the leave to construct order.

compressor station site.

Findings

The Board is satisfied that all the necessary land rights will be acquired by Union for the routing and construction of the pipelines.

Are the pipelines designed in accordance with the current technical and safety requirements?

Evidence

The transmission pipeline and the gathering pipelines are designed to meet all the applicable codes and regulations, CSA Z662 (the 2007 version), CSA Z245.1, the TSSA guidelines and Ontario Regulation 210.

Union confirmed that the Jacob Storage Pool pipeline will be covered under the Union Gas Pipeline Integrity Management Program. This program meets the requirements of the current Annex N in the CSA Z662-07.

Findings

The Board is satisfied that the transmission pipeline and gathering pipelines subject to the leave to construct application will be designed and operated in accordance with all appropriate and current regulatory requirements.

APPLICATION FOR WELL DRILLING LICENCES

The Board's review of an application for well licences includes the geological evidence related to the well location and proposed drilling program, the technical capability of an applicant to conduct the drilling in accordance with applicable standards and codes, and environmental and landowner related matters.

The Board recommends that the Minister of Natural Resources issue the licences for the two wells as applied for by Union. The Report to the Minister of Natural Resources, attached as Appendix E to this Decision, describes in more detail the evidence and submissions and provides reasons for the favourable Decision.

Board staff proposed a set of standard conditions to the Board Report to the MNR.

These conditions are standard conditions that are typically part of the Board's favourable report to the MNR regarding the well drilling licence applications. The MNR supported the conditions as proposed by Board staff. The MNR suggested that the condition 5.1 which refers to the CSA Z341 the wording be modified to read the "latest edition" of the CSA Z341. The Board finds this recommendation acceptable. The Board will attach these conditions as Schedule 2 to Appendix E of this Decision and Order.

OTHER MATTERS

The scope of KFA submissions filed with the Board and all the parties in the proceeding on June 13, 2011 will be addressed as "other matters".

The KFA's submissions addressed the following:

- Overview of operator/landowner relationship;
- Future abandonments;
- Past abandonments; and
- Landowner Compensation.

The issues addressed by the KFA fall beyond the scope of Board's review of Union's EB-2011-0013/EB-2011-0014/EB-2011-0015. On May 3, 2011 by way of PO No. 3 and Decision on Motion the Board addressed the matter of compensation for storage rights and determined that compensation matters cannot be brought before the Board under section 38 by a party such as the KFA which does not have a direct interest in, or is not a landowner, in the proposed or designated gas storage pool.

The Board also notes that the Issues List for this proceeding does not include matters of operator/landowner relationships or matters of present and past abandonment of storage operations. Moreover, these issues are beyond the scope of the Board's legal authority under the *OEB Act* with regard to natural gas storage operations in Ontario.

COST OF THE PROCEEDING

The KFA was the only intervener that requested and was granted cost award eligibility status. If the KFA wishes to seek an award of costs it shall file a cost submission in accordance with the *Practice Direction on Cost Awards* with the Board Secretary and with the Applicant 15 days of the date of this Decision with Reasons.

The Applicant may make submissions regarding the cost claims within 22 days of the Decision with Reasons and the intervenor may reply within 30 days of the Decision with Reasons. A decision and order regarding cost awards will be issued at a later date.

Upon receipt of the Board's cost award decision and order, the Applicant shall pay any awarded costs with dispatch.

The Applicant shall pay the Board's costs incidental to this proceeding upon receipt of the Board's invoice.

DATED at Toronto, July 19, 2011
ONTARIO ENERGY BOARD

Original signed by

Marika Hare, Presiding Member

APPENDIX A

TO

DECISION WITH REASONS

EB-2011-0013

EB-2011-0014

EB-2011-0015

Union Gas Limited

COMPLETE LIST OF PARTIES

Dated July 19, 2011

**Union Gas Limited
EB-2011-0013**

APPLICANT & LIST OF INTERVENORS

July 19, 2011

APPLICANT

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Union Gas Limited

EB-2011-0013

APPLICANT & LIST OF INTERVENORS

-2-

July 19, 2011

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Union Gas Limited

EB-2011-0013

APPLICANT & LIST OF INTERVENORS

-3-

July 19, 2011

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Union Gas Limited

EB-2011-0013

APPLICANT & LIST OF INTERVENORS

-4-

July 19, 2011

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APPENDIX B

TO

DECISION WITH REASONS

EB-2011-0013

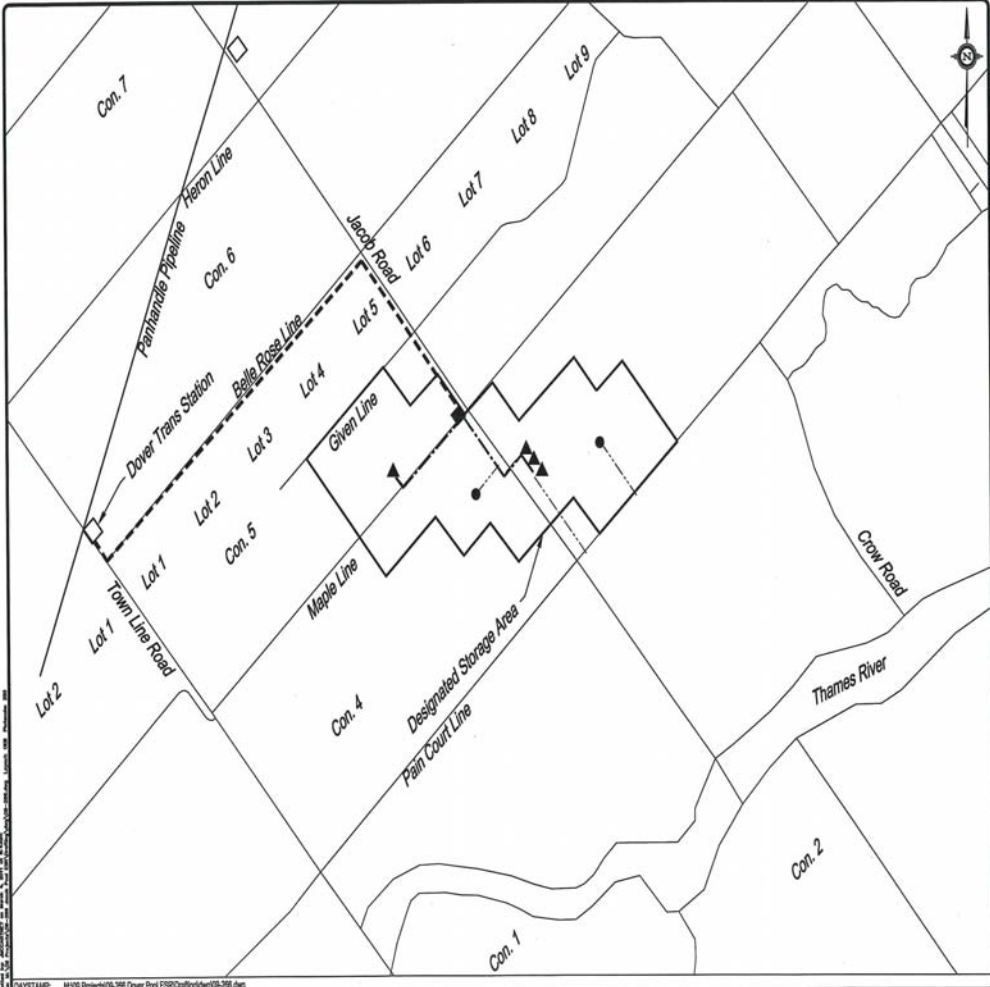
EB-2011-0014

EB-2011-0015

Union Gas Limited

MAP OF THE PROPOSED PROJECT

Dated July 19, 2011



- LEGEND:**
- Proposed Compressor Station
 - Observation Well
 - ▲ Injection/Withdrawal Well
 - NPS 8 Transmission Line
 - - - NPS 6 & 8 Gathering Line
 - Access Road



*Proposed Jacob
Storage Pool*

APPENDIX C
TO
DECISION WITH REASONS

EB-2011-0013
EB-2011-0014
EB-2011-0015

ORDER DESIGNATING A GAS STORAGE AREA AND
AUTHORIZATION TO INJECT, STORE AND REMOVE GAS

Dated July 19, 2011



EB-2011-0013

IN THE MATTER OF the *Ontario Energy Board Act, 1998*;

AND IN THE MATTER OF an application by Union Gas Limited for an Order designating the area known as the Jacob Pool, in the Municipality of Chatham-Kent, as a gas storage area.

AND IN THE MATTER OF an application by Union Gas Limited for an order authorizing the injection of gas into, storage of gas in, and removal of gas from Jacob Pool designated gas storage area.

BEFORE: Marika Hare
Presiding Member

**ORDER DESIGNATING A GAS STORAGE AREA AND AUTHORIZING THE
INJECTION OF GAS INTO, STORAGE OF GAS IN, AND REMOVAL OF GAS FROM
A GAS STORAGE POOL**

Union Gas Limited (“Union” or the “Applicant”) filed applications dated January 17, 2011, with the Ontario Energy Board (the “Board”) under sections 36.1(1), 38(1), 40(1) and 90(1) of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B (the “Act”). Union applied for the following:

1. Designation of the proposed Jacob Gas Storage Pool (the “Jacob Pool”) and authority to operate the gas storage pool, pursuant to section 36.1(1) of the Act; and subsection 38(1) of the Act, respectively. This application was assigned Board File No. EB-2011-0013.
2. Leave to construct a transmission pipeline, pursuant to section 90 of the Act, to connect the proposed storage area with Union’s Dover Transmission Station; and gathering pipelines to connect wells to the compression station. This application was assigned Board File No. EB-2011-0014
3. Licences to drill three injection/withdrawal wells in the proposed Jacob Pool,

pursuant to section 40 of the Act. This application was assigned Board File No. EB-2011-0015.

A single Notice of Application with respect to all three matters was issued on March 7, 2011. The Applicant served and published the Notice of Application as directed by the Board. The Ministry of Natural Resources (“MNR”), Enbridge Gas Distribution Inc. (“Enbridge”) and the Kent Federation of Agriculture (“KFA”) intervened in the proceeding.

The Board proceeded by a written hearing with a Technical Conference held on June 2, 2011. The record was completed on June 16, 2011.

On July 19, 2011 the Board issued a Decision with Reasons approving all the applications sought under Board File Nos. EB-2011-0013; EB-2011-0014; EB-2011-0015. This Order to designate the Jacob Pool as a gas storage area and authorizing the injection of gas, storage of gas in and removal of gas from the Jacob Pool is issued in accordance with the Board’s July 19, 2011 Decision with Reasons.

THE BOARD ORDERS THAT:

1. Pursuant to section 36.1(1) of the *Ontario Energy Board Act, 1998*, S.O. 1998, c.15, Schedule B, the area described by the Metes and Bounds description attached as Schedule 1 to this Order is designated as a gas storage area.
2. Pursuant to section 38(1) of the *Ontario Energy Board Act, 1998*, Union Gas is authorized to inject gas into, store gas in and remove gas from the area known as Jacob Pool in the geographic Municipality of Chatham-Kent, Province of Ontario, which has been designated as a gas storage area, and to enter into and upon the land in the area for such purposes, subject to Conditions of Approval set forth in the Schedule 2 to this Order.

DATED at Toronto July 19, 2011
ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

Schedule 1

EB-2011-0013

Union Gas Limited

**METES AND BOUNDS DESCRIPTION
OF THE BOUNDARY OF THE
JACOB DESIGNATED STORAGE AREA**

METES AND BOUNDS DESCRIPTION
OF THE PROPOSED BOUNDARY OF THE

JACOB POOL DESIGNATED STORAGE AREA
IN THE GEOGRAPHIC MUNICIPALITY OF CHATHAM-KENT

ALL AND SINGULAR that certain parcel or tract of land in the Geographical Township of Dover, now in the Municipality of Chatham-Kent and being composed of part of Lots 4 and 5, Concession 5 and part of Lots 4, 5, 6 and 7, Concession 4, part of the road allowance between Lots 5 and 6, Concession 4 and part of the road allowance between Concession 4 and 5 all in the Geographical Township of Dover, now in the Municipality of Chatham-Kent, which said parcel may be more particularly described as follows:

COMMENCING at the north-westerly corner of Lot 4, Concession 4. Thence southeasterly along the line between Lots 3 and 4, on a bearing of south 41 degrees 20 minutes and 10 seconds east, a distance of 345.50 metres to the line between the north and south half of the north half of Lot 4, Concession 4;

THENCE north-easterly along the line between the north and south half of the north half of Lot 4 Concession 4, on a bearing of north 48 degrees 56 minutes and 30 seconds east, a distance of 618.92 metres to the line between Lots 4 and 5, Concession 4;

THENCE south-easterly along the line between Lots 4 and 5, Concession 4 on a bearing of south 41 degrees 41 minutes 40 seconds east, a distance of 346.83 metres to the line between the north and south half of Lot 5, Concession 4;

THENCE north-easterly along the line between the north and south half of Lot 5, Concession 4, on a bearing of north 48 degrees 18 minutes and 0 seconds east, a distance of 313.35 metres to the line between the east and west half of Lot 5, Concession 4;

THENCE south-easterly along the line between the east and west half of Lot 5, Concession 4 on a bearing of south 41 degrees 26 minutes 20 seconds east, a distance of 345.22 metres to the line between the north and south half of the south half of Lot 5, Concession 4;

THENCE north-easterly along the line between the north and south half of the south half of Lot 5, Concession 4, continuing across the road allowance between Lots 5 and 6,

Concession 4, and continuing on the line between the north and south half of the south half of Lot 6, Concession 4, on a bearing of north 48 degrees 5 minutes and 50 seconds east, a distance of 646.84 metres to the line between the east and west half of Lot 6, Concession 4;

THENCE south-easterly along the line between the east and west half of Lot 6, Concession 4, on a bearing of south 41 degrees 59 minutes 30 seconds east, a distance of 345.42 metres to a point in the northerly limit of the road allowance between Concessions 3 and 4 being Pain Court Line;

THENCE north-easterly along the northerly limit of the road allowance between Concessions 3 and 4 being Pain Court Line on a bearing of north 48 degrees 17 minutes 40 seconds east, a distance of 952.84 metres to the south easterly corner of Lot 7, Concession 4;

THENCE north-westerly along the line between Lots 7 and 8, Concession 4, on a bearing of north 41 degrees 31 minutes and 30 seconds west, a distance of 677.36 metres to the line between the north and south half of Lot 7, Concession 4;

THENCE south-westerly along the line between the north and south half of Lot 7, Concession 4, on a bearing of south 48 degrees 50 minutes 10 seconds west, a distance of 315.83 metres to the line between the east and west half of Lot 7, Concession 4;

THENCE north-westerly along the line between the east and west half of Lot 7, Concession 4, on a bearing of north 41 degrees 31 minutes 30 seconds west, a distance of 342.04 metres to the line between the north and south half of the north half of Lot 7, Concession 4;

THENCE south-westerly along the line between the north and south half of the north half of Lot 7, Concession 4 and continuing on along the line between the north and south half of the north half of Lot 6, Concession 4, on a bearing of south 48 degrees 50 minutes 10 seconds west, a distance of 641.42 metres to the line between the east and west half of Lot 6, Concession 4;

THENCE north-westerly along the line between the east and west half of Lot 6,

Concession 4, on a bearing of north 41 degrees 29 minutes 10 seconds west, a distance of 342.04 metres to the southerly limit of the road allowance between Concessions 4 and 5, being Maple Line.

THENCE south-westerly along the southerly limit of the road allowance between Concessions 4 and 5, being Maple Line, on a bearing of south 48 degrees 53 minutes 40 seconds west, a distance of 340.25 metres to a point in the southerly limit of said road allowance in the northerly limit of Lot 5, Concession 4;

THENCE north-westerly crossing the road allowance between Concessions 4 and 5, being Maple Line and continuing along the widened limit of the road allowance between Lots 5 and 6, Concession 5, on a bearing of north 40 degrees 17 minutes and 20 seconds west, a distance of 369.05 metres to a point in that widened limit to the line between the north and south half of the south half of Lot 5, Concession 5;

THENCE south-westerly along the line between the north and south half of the south half of Lot 5, Concession 5, on a bearing of south 48 degrees 59 minutes 50 seconds west, a distance of 298.41 metres to a point in the east and west half of Lot 5, Concession 5;

THENCE north-westerly along the line between the east and west half of Lot 5, Concession 5, on a bearing of north 41 degrees 1 minute 40 seconds west, a distance of 344.56 metres to a point in the southerly limit of Given Line;

THENCE south-westerly along the southerly limit of Given Line, on a bearing of south 48 degrees 59 minutes 50 seconds west, a distance of 921.90 metres to the line between Lots 3 and 4, Concession 5;

THENCE south-westerly along the line between Lots 3 and 4, Concession 5, on a bearing of south 41 degrees 10 minutes 10 seconds east, a distance of 694.92 metres to the southwest corner of Lot 4, Concession 5;

THENCE southerly crossing the road allowance between Concessions 4 and 5, being Maple Line, on a bearing of south 7 degrees 54 minutes 0 seconds west, a distance of 30.64 metres to the point of commencement.

Schedule 2

EB-2011-0013

Union Gas Limited

Conditions of Approval

Authorization to Inject, Store and Remove Gas

Union Gas Limited
Jacob Pool Storage Project
EB-2011-0013
Authorization to Inject, Store and Remove Gas
Conditions of Approval

1. Operation of the Jacob Storage Pool

- 1.1 Union Gas Limited ("Union) shall rely on the evidence filed with the Board in the EB-2011-0013; EB-2011-0014 and EB-2011-0015 proceeding. Union shall comply with applicable laws, regulations and codes to the satisfaction of the responsible agency pertaining to the construction, operation and maintenance of the proposed project and should evaluations conducted in accordance with those applicable laws, regulations and codes identify any risk and/or specify any remedial work, shall implement, complete and maintain such works prior to commencement of any injection.
- 1.2 Union shall design, construct, operate, maintain and abandon the wells and facilities in accordance with the latest edition of CSA Z341 Storage of Hydrocarbons in Underground Formations and in accordance with the *Oil, Gas and Salt Resources Act* and its regulations and operating standards.
- 1.3 Union shall protect the integrity of the reservoir and ensure the safe operation of the Jacob Storage Pool by complying with the requirements of the Provincial Operating Standard, the latest edition of CSA Z341 and any other applicable laws, regulations and codes.
- 1.4 Union shall advise the Board's designated representative of any proposed material change or abnormal events in construction or restoration procedures that are reported to authorities. In the event of an emergency, the Board shall be informed immediately after the fact.
- 1.5 Union shall not operate the Jacob Storage Pool above a maximum allowed operating pressure representing a pressure gradient of 15.8 kPa/m of depth to the top of the reservoir until leave of the Board is obtained.
- 1.6 Union shall ensure that the construction, operation and maintenance of the Jacob Storage Pool does not affect the quality or supply of potable water. Union shall implement a water well monitoring program to include

preconstruction monitoring and to commit to further monitoring should a complaint arise during or following construction. In the event that the quality of the potable water is impacted by the construction, operation and maintenance for the Jacob Storage Pool, Union shall provide adequate fresh water supplies to all affected landowners until the problem is rectified.

- 1.7 Should Union fail to commence injection before July 1, 2013, Union shall be required to apply to the Board for an extension of the authority granted under the Board's Order and will be required to submit evidence to show why such an extension shall be granted.
- 1.8 After the date on which the Board grants an order pursuant to Section 38(1) of the Ontario Energy Board Act, 1998 and before commencement of drilling operations or pipeline construction to use the DSA for storage, and thereafter while the DSA or any part thereof is being used for storage operations, Union shall obtain and maintain in full force and effect insurance coverage for its operations at the Jacob Pool including, but not limited to, liability and pollution coverage. Union shall notify the Board once insurance coverage has been obtained for the Jacob Pool in accordance with this condition.

2. **General**

- 2.1 For the purposes of these conditions conformity of the Applicant with the latest edition of CSA Z341, the *Oil, Gas and Salt Resources Act*, and the *Provincial Operating Standard* shall be to the satisfaction of the Ministry of Natural Resources.
- 2.2 The authority granted under this Order to Union is not transferable to another party, without leave of the Board.
- 2.3 The Board's designated representative for the purpose of these conditions shall be the Manager, Natural Gas Applications.

3 **Just and Equitable Compensation**

- 3.1 Union shall offer to pay landowners and/or tenants just and equitable compensation for any damages, including present and future crop damage arising from: drilling of injection/withdrawal wells; installation of gathering pipelines; access road construction.

APPENDIX D

TO

DECISION WITH REASONS

Union Gas Limited

**Leave to Construct Order
EB-2011-0014**

Dated July 19, 2011



EB-2011-0014

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

AND IN THE MATTER OF an application by Union Gas Limited for an Order granting leave to construct natural gas pipelines in the Municipality of Chatham-Kent.

BEFORE: Marika Hare
Presiding Member

ORDER

LEAVE TO CONSTRUCT NATURAL GAS PIPELINES

Union Gas Limited (“Union” or the “Applicant”) filed applications dated January 17, 2011, with the Ontario Energy Board (the “Board”) under sections 36.1(1), 38(1), 40(1) and 90(1) of the *Ontario Energy Board Act*, 1998, S.O. 1998, c.15, Schedule B (the “Act”). Union applied for the following:

1. Designation of the proposed Jacob Gas Storage Pool (the “Jacob Pool”) and authority to operate the gas storage pool, pursuant to section 36.1(1) of the Act; and subsection 38(1) of the Act, respectively. This application was assigned Board File No. EB-2011-0013.
2. Leave to construct a transmission pipeline, pursuant to section 90 of the Act, to connect the proposed storage area with Union’s Dover Transmission Station; and gathering pipelines to connect wells to the compression station. This application was assigned Board File No. EB-2011-0014
3. Licences to drill three injection/withdrawal wells in the proposed Jacob Pool, pursuant to section 40 of the Act. This application was assigned Board File No. EB-2011-0015.

A Notice of Application with respect to all three matters was issued on March 7, 2011. The Applicant served and published the Notice of Application as directed by the Board. The Ministry of Natural Resources, Enbridge Gas Distribution Inc. and the Kent Federation of Agriculture intervened in the proceeding.

The Board proceeded by a written hearing with a Technical Conference held on June 2, 2011. The record was completed on June 16, 2011.

On July 19, 2011 the Board issued a Decision with Reasons approving all the applications sought under Board File Nos. EB-2011-0013; EB-2011-0014; EB-2011-0015. This leave to construct order is issued in accordance with the Board's July 19, 2011 Decision with Reasons.

THE BOARD ORDERS THAT:

Union Gas Limited is granted leave to construct approximately construct 4,712 metres of 8 inch Nominal Size Pipe ("NPS") pipeline to connect the proposed storage area with Union's Dover Transmission Station; and construction of 1,829 metres of NPS 6 and 8 gathering pipelines to connect wells to a proposed compressor station all in the Municipality of Chatham-Kent, pursuant to subsection 90 (1) of the Act, subject to the Conditions of Approval set forth in Schedule 1 to this Order.

DATED at Toronto, July 19, 2011

ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

Schedule 1

EB-2011-0014

Union Gas Limited

Conditions of Approval

Leave to Construct

**Union Gas Limited
Jacob Pool Storage Project
Leave to Construct Application
EB-2011-0014
Conditions of Approval**

1. General Requirements

- 1.1 Union Gas Limited (“Union”) shall construct the facilities and restore the land in accordance with its application and the evidence filed in EB-2011-0013; EB-2011-0014 and EB-2011-0015 proceeding except as modified by this Order and these Conditions of Approval.
- 1.2 Unless otherwise ordered by the Board, authorization for Leave to Construct shall terminate December 31, 2012, unless construction has commenced prior to that date.
- 1.3 Union shall implement all the recommendations of the Environmental Report filed in the pre-filed evidence, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee (“OPCC”) review.
- 1.4 Union shall advise the Board's designated representative of any proposed material change in construction or restoration procedures and, except in an emergency, Union shall not make such change without prior approval of the Board or its designated representative. In the event of an emergency, the Board shall be informed immediately after the fact.
- 1.5 Union shall ensure that the construction, operation and maintenance of the Jacob Storage Pool does not affect the quality or supply of potable water. Union shall implement a water well monitoring program to include preconstruction monitoring and to commit to further monitoring should a complaint arise during or following construction. In the event that the quality of the potable water is impacted by the construction, operation and maintenance for the Jacob Storage Pool, Union shall provide adequate fresh water supplies to all affected landowners until the problem is rectified.

2. Project and Communications Requirements

- 2.1 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Natural Gas Applications.
- 2.2 Union shall designate a person as project engineer and shall provide the name of the individual to the Board's designated representative. The project engineer will be responsible for the fulfillment of the Conditions of Approval on the construction site. Union shall provide a copy of the Order and Conditions of Approval to the project engineer, within seven days of the Board's Order being issued.
- 2.3 Union shall give the Board's designated representative and the Chair of the OPCC ten days written notice in advance of the commencement of the construction.
- 2.4 Union shall furnish the Board's designated representative with all reasonable assistance for ascertaining whether the work is being or has been performed in accordance with the Board's Order.
- 2.5 Union shall file with the Board's designated representative notice of the date on which the installed pipelines were tested, within one month after the final test date.
- 2.6 Union shall furnish the Board's designated representative with five copies of written confirmation of the completion of construction. A copy of the confirmation shall be provided to the Chair of the OPCC.

3. Monitoring and Reporting Requirements

- 3.1 Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints that have been received to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.

- 3.2 The interim monitoring report shall confirm Union's adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.
- 3.3 The final monitoring report shall describe the condition of any rehabilitated land and the effectiveness of any mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

4. Easement Agreements

- 4.1 Union shall offer the form of agreement approved by the Board to each landowner, as may be required, along the route of the proposed work.

5. Other Approvals

- 5.1 Union shall obtain all other approvals, permits, licences, and certificates required to construct, operate and maintain the proposed project, shall provide a list thereof, and shall provide copies of all such written approvals, permits, licences, and certificates upon the Board's request.

APPENDIX E

TO

DECISION WITH REASONS

Union Gas Limited

Report to the Minister of Natural Resources

Well Licences Application

EB-2011-0015

Dated July 19, 2011

Ontario Energy
Board

Commission de l'énergie
de l'Ontario



EB-2011-0015

IN THE MATTER OF the Ontario Energy Board Act, 1998,
Schedule B;

AND IN THE MATTER OF an application Union Gas Limited
to the Ministry of Natural Resources for a license to drill wells
in the area designated as the Jacob Pool in the Municipality
of Chatham-Kent.

REPORT OF THE BOARD

July 19, 2011

INTRODUCTION

Union Gas Limited (“Union” or the “Applicant”) proposed to provide storage services upon development of approximately 2.45 billion cubic feet (Bcf) of storage capacity of natural gas working storage space in the proposed Jacob Gas Storage Pool with the planned in-service date of July 1, 2012.

The development of the Jacob Storage pool requires that the Applicant be granted the following orders:

- An order designating the area containing a gas reservoir known as the Heritage Pool as a storage area pursuant to section 36.1(1) of the Act (EB-2011-0013);
- An order granting authority to inject gas into, store gas in, and remove gas from the Jacob Gas Storage Pool, pursuant to subsection 38(1) of the Act (EB-2011-0013);
- An order for leave to construct natural gas pipelines pursuant to section 90 of the Act to connect Jacob Pool to Union’s integrated pipeline system (EB-2011-0014)
- A favourable report of the Board under subsection 40(1) of the Act, to the Minister of Natural Resources to whom Union has applied for licences to drill three injection/withdrawal wells within the proposed Jacob Gas Storage Pool.

On July 19, 2011, the Board issued a Decision with Reasons that approved the EB-2011-0013; EB-2011-0014; and EB-2011-0015 applications and granted all the orders required for pool development and operation. This Report is issued in accordance with the Board’s July 19, 2011 Decision with Reasons.

Referral of the Application to Drill Wells

By letter dated February 1, 2011, the Ministry of Natural Resources, Petroleum Resources Centre, referred to the Board applications by Union for licences to drill the following wells within the proposed designated storage area:

- Pain Court 2 (Horiz.#1), Dover 3-6-IV
- Pain Court 2 (Horiz.#1, Lat.#1), Dover 3-6-IV
- Pain Court 3 (Horiz.#1), Dover 3-6-IV

The well drilling is scheduled to start in January, 2012.

Union proposes to drill three new wells using two surface locations. A map showing locations of the proposed wells within a designated storage area is attached as Schedule 1 to this report.

Scope of the Review

In considering an application for a well drilling license the Board's review under section 40 of the Act typically includes the geological evidence related to the well location, the proposed drilling program, the technical capability of an applicant to conduct the drilling in accordance with applicable standards and codes, and environmental and landowner matters. The following issues have been determined by the Board as a scope of the review of section 40(1) application in the Jacob Pool proceeding.

- Does the geological evidence support the proposed well locations and drilling programs?
- Are the proposed storage wells appropriately designed? Are construction and maintenance plans in order?
- Does the applicant have the technical capability to conduct the drilling in accordance with applicable standards and codes?
- Does the applicant propose an appropriate program to mitigate the environmental impacts and impacts on directly affected properties?

Does the geological evidence support the proposed well locations and drilling programs?

The proposed surface locations and well paths are described in the MNR Applications for a well license. The well locations were determined on the basis of data from existing wells within the proposed DSA and the 2-D and 3-D seismic interpretation. The Well

PC2 is a multilateral heading west-southwest. NPC3 penetrates the eastern portion of the reservoir. The paths were selected to maximize the intersection of porous dolomite along each well path. Union's evidence stated that the drilling paths were properly engineered and technically feasible.

A map showing the locations of the proposed I/W wells within the DSA boundary is attached as Schedule 1 to this report.

Are the proposed storage wells appropriately designed? Are construction and maintenance plans in order?

Union's evidence is that all wells and facilities will be designed, constructed, operated, maintained and abandoned in accordance with the OGSRA, its regulations and the Provincial Operating Standards.

Does the applicant have the technical capability to conduct the drilling in accordance with applicable standards and codes?

Union stated that the wells will be drilled and constructed to comply with CSA Z341.1, the OGSRA and its regulations, the Provincial Operating Standards and the *Occupational Health and Safety Act*. For the proposed wells, a drilling program filed with the application contains detailed drilling procedures and casing specifications. The drilling programs include the geological prognosis, reporting, the safety procedures required by the *Occupational Health and Safety Act* and the OGSRA, its regulations and the Provincial Operating Standards.

Does the applicant propose an appropriate program to mitigate the environmental impacts and impacts on directly affected properties?

Section 9 of the Environmental Report addresses well drilling impacts. The ER describes the facilities, construction procedures, identifies potential environmental impact, recommends mitigation and describes public consultation. The ER was forwarded for review to the ministries members of the Ontario Pipeline Coordinating Committee and other affected parties. No significant concerns were raised.

Union is committed to implement the mitigation recommended in the ER and prescribed in the permit approvals and licences. In addition, site-specific mitigation measures will be developed in consultation with individual property owners. Union's Construction

Specifications, which include standard environmental mitigation measures, will be followed.

Union holds all Gas Storage Leases and P&NG Leases for the private properties in the production unit area, which provide the surface rights needed to drill the proposed wells and construct facilities on the property.

Recommendation

The Board's review of the application for well licences found that the proposed drilling is in the public interest with respect to the integrity of the gas storage reservoir, the safety of drilling operations, the environmental impacts of drilling and construction, and impacts on directly affected landowners. The Board found the Applicant to be technically competent to undertake the planned drilling program and the proposed well completion activities.

In accordance with the Decision with Reasons of July 19, 2011 the Board recommends approval of the Applications for drilling licences for the wells:

- Pain Court 2 (Horiz.#1), Dover 3-6-IV
- Pain Court 2 (Horiz.#1, Lat.#1), Dover 3-6-IV
- Pain Court 3 (Horiz.#1), Dover 3-6-IV

The recommendation is subject to the conditions of approval attached in Schedule 2 to this Report. During the proceeding the Applicant and intervenors had the opportunity to comment on draft conditions of drilling licences approval proposed by Board Staff. No comments were received from the intervenors. The Applicant stated, in its reply Argument, dated June 16, 2011, that the conditions are acceptable. The Board-approved Conditions deal with potential adverse impacts and effects of the drilling of the wells. According to the Conditions, the Applicant should adhere to the evidence and all the undertakings given at the hearing and to comply with all applicable laws, regulations and codes during construction of the wells. Furthermore, the Conditions call for land restoration and for minimizing adverse impacts on agricultural land and farming operations. The Conditions require monitoring and reporting to the Board of impacts and their mitigation during and after construction, and the recording of landowner's concerns and reporting on the resolution of these concerns.

The Conditions also set a twelve month term from the date of the Report for the MNR to issue the well licences.

DATED at Toronto, July 19, 2011

ONTARIO ENERGY BOARD

Original Signed By

Kirsten Walli
Board Secretary

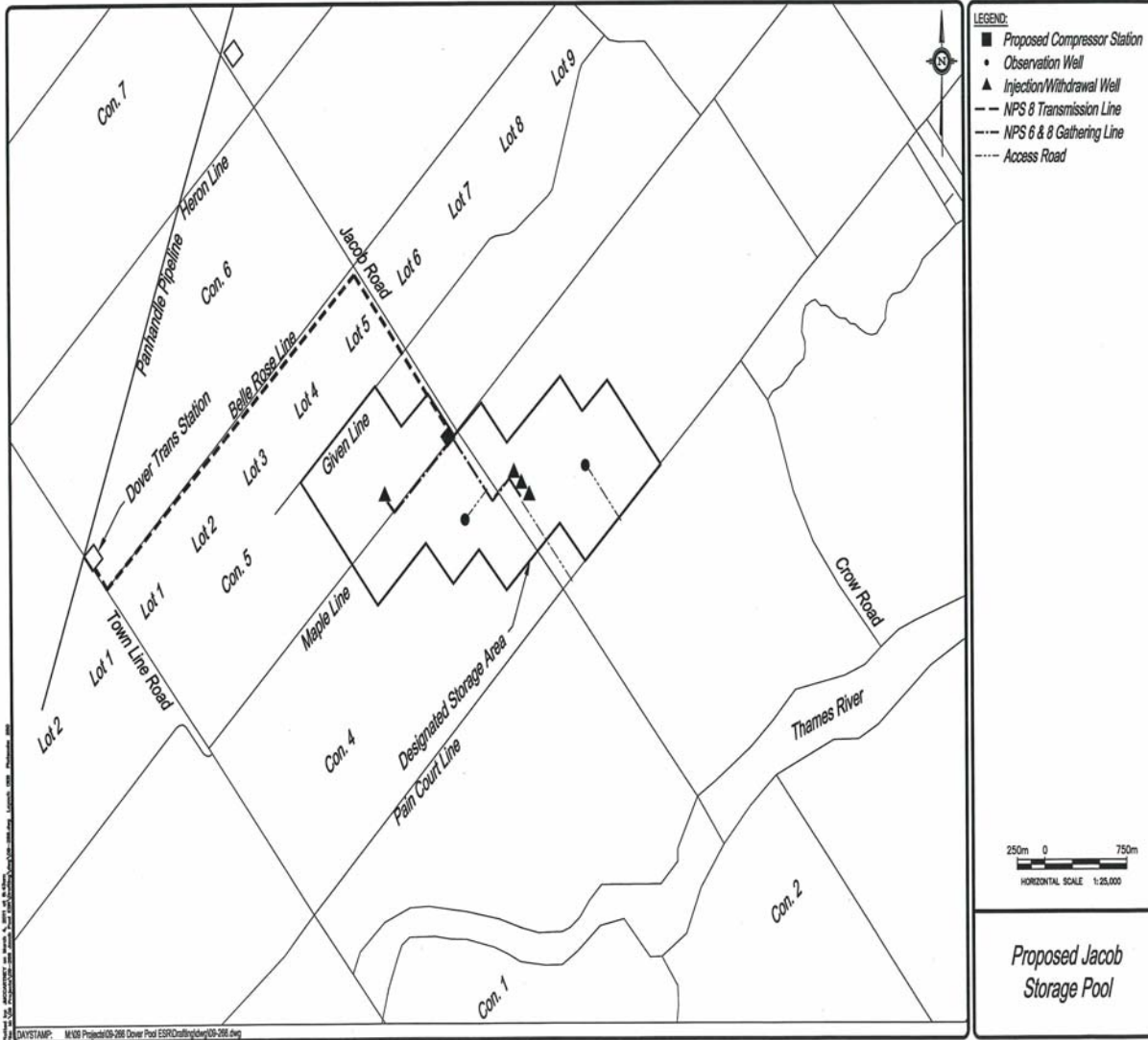
Schedule 1

Union Gas Limited

Application for Wells Licences

EB-2011-0015

Map Showing Location of the Proposed Wells



Proposed Jacob Storage Pool

Schedule 2

Union Gas Limited

Application for Wells Licences

EB-2011-0015

Conditions of Approval

Jacob Pool Development Project

Union Gas Limited EB-2011-0015

Conditions of Approval

Wells Drilling Licences Application

1. General Requirements

- 1.1. Union Gas Limited ("Union") shall rely on the evidence filed with the Board in EB-2011-0013; EB-2011-0014 and EB-2011-0015 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 licences is limited to twelve months from the date of the Board's Report to the Ministry of Natural Resources.
- 1.3. The authority granted under this Order to Union is not transferable to another party without leave of the Board. For the purpose of this condition another party is any party except Union Gas Limited.

2. Construction Requirements

- 2.1. Union shall construct the facilities and restore the land in accordance with its Application and evidence and the undertakings given to the Board, except as modified by this Order and these Conditions of Approval.
- 2.2. Union shall ensure that the movement of equipment is carried out in compliance with all procedures filed with the Board, 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.
- 2.3. 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.

- 2.4 Union, shall implement all the recommendations of the Jacob Storage Pool Environmental Management Plan in the pre-filed evidence.

3. Monitoring and Reporting Requirements

- 3.1 Both during and after construction, Union shall monitor the impacts of construction, and shall file four copies of both an interim and a final monitoring report with the Board. The interim monitoring report shall be filed within six months of the in-service date, and the final monitoring report shall be filed within fifteen months of the in-service date. Union shall attach a log of all complaints to the interim and final monitoring reports. The log shall record the times of all complaints received, the substance of each complaint, the actions taken in response, and the reasons underlying such actions.
- 3.2. The interim monitoring report shall confirm Union adherence to Condition 1.1 and shall include a description of the impacts noted during construction and the actions taken or to be taken to prevent or mitigate the long-term effects of the impacts of construction. This report shall describe any outstanding concerns identified during construction.
- 3.3 The final monitoring report shall describe the condition of the rehabilitated land and the effectiveness of the mitigation measures undertaken. The results of the monitoring programs and analysis shall be included and recommendations made as appropriate. Any deficiency in compliance with any of the Conditions of Approval shall be explained.

4. Project and Communication Requirements

- 4.1 For the purposes of these conditions, conformity of the Applicant with the latest edition of CSA Z341, shall be to the satisfaction of the Ministry of Natural Resources.
- 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, the Board and to all appropriate landowners.
- 4.3 The Board's designated representative for the purpose of these Conditions of Approval shall be the Manager, Natural Gas Applications.