

January 28, 2013

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”)  
Thunder Bay Pipeline Project (revised)  
Board File # EB-2012-0226\EB-2012-0227**

Further to the Board Staff interrogatories of January 21, 2013, please find attached two copies of Union’s responses.

Sincerely,

[original signed by]

Mary Jane Patrick  
Administrative Analyst, Regulatory Projects  
:mjp  
Encl.

cc: Neil McKay, Manager Facilities Applications  
Zora Crnojacki, Project Advisor

UNION GAS LIMITED  
Response to Interrogatory  
from Board Staff

1. Reference: Revised Application, dated November 19, 2012; Prefiled Evidence/ page 4/paragraphs 20-22

The revised application stated that the project economics have not been completed because there are no new customers to provide revenue associated with the project.

Please explain how the cost of the replacement project is going to be covered and discuss how Union intends to allocate its budget for pipeline maintenance and integrity management based projects. How is that budget treated in the most recently approved rates application?

**Response:**

As part of the EB-2011-0210 Settlement Agreement, parties agreed to reduce Union's proposed 2013 distribution-related rate base by \$12.0 million. The total capital budget for rate making in 2013, as a result of the Settlement Agreement, is approximately \$267 million. The Thunder Bay Replacement Project will be managed within the overall capital budget envelop agreed to in EB-2011-0210.

In Union's 2013 Board-approved cost allocation study, Union North distribution main plant is categorized as grid, joint or sole. The Thunder Bay project distribution main plant is classified as joint-use as it is a large diameter main that serves the distribution system. The allocation of joint-use distribution main costs to Union North rate classes is in proportion to system peak over average day demand, excluding customers attached directly to the TransCanada system (i.e. sole-use main).

The Thunder Bay Replacement Project also includes costs associated with distribution land rights plant. In Union's 2013 Board-approved cost allocation study Union North distribution land rights plant is allocated to Union North rate classes in proportion to the allocation of demand-related distribution mains and M&R plant.

There are no O&M costs associated with the Thunder Bay project. In Union's 2013 Board-approved cost allocation study, Union North distribution mains O&M expenses are allocated to rate classes in proportion to the allocation of Union North distribution mains plant.

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2. Prefiled Evidence/ page 4/paragraphs 20-22

Union stated in its prefiled evidence that, since 2002 it developed “an extensive pipeline maintenance and integrity management program” and that the proposed replacement is part of implementation of this program.

Please describe the integrity management program in terms of background, regulatory requirements and schedule of assessments and note any future integrity management pipeline replacement projects planned on the basis of this assessment.

Please describe specific integrity related issues along the existing pipeline that is proposed for replacement.

**Response:**

The requirements for the Pipeline Integrity Management Program are included in Ontario Regulation 210/01 and the National Energy Board (NEB) Onshore Pipeline Regulations (OPR-99). The Canadian Standards Association (CSA) standard for *Oil and Gas Pipeline Systems*, CSA Z662, includes the industry standards and these are adopted by the Technical Standards and Safety Authority (TSSA) and the National Energy Board (NEB) for the pipeline systems within their respective jurisdiction in Ontario and across Canada.

As specified in the Ontario Regulations through the TSSA Code Adaption Document, Pipeline Integrity Management Programs are to include the following key elements:

- a) Management system;
- b) Working records management system;
- c) Condition monitoring program; and,
- d) Mitigation program.

Union has followed this general outline in structuring its integrity management programs and has continued to evolve them as the standard and regulatory requirements have evolved over the years.

As part of the Pipeline Integrity Management Program, in 2002, Union initiated a 10-year plan to systematically assess the condition of approximately 2,800 km of pipelines that operate at or above 30% of the Specified Minimum Yield Strength (SMYS) and implement mitigation plans to address integrity issues that were identified. This was subsequently adjusted to a 12 year baseline assessment plan after consultation with the TSSA, taking into

account Union's experience with implementing the plan. The initial assessments on higher risk lines have been completed, which includes the assessment of the Thunder Bay Line.

The primary method used to complete condition monitoring is internal inline inspection, or "pigging" of the lines, to detect metal loss and other anomalies, followed up with investigative digs at specific sites based on the results of the inspections. It was through this process that Union assessed the integrity of the Thunder Bay Line and determined that replacement of the line was the most effective means of addressing the issues that were found.

The key integrity issue with this line is stress corrosion cracking (SCC). Advanced levels of SCC were found at the joints along the full length of the pipeline. Given the level and distribution of the SCC along the line, the most effective and practical way to mitigate the risk associated with the SCC was deemed to be replacement of the pipeline.

Future pipeline replacements based on integrity assessments include the Owen Sound line, along with short sections of various lines to address specific integrity issues.

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3. Reference: Revised Application, dated November 19, 2012

The revised application indicates that there is a need for the replacement to address the integrity of the existing pipeline and the replacement pipeline will be upgraded to NPS 12 from NPS 10 to maintain the minimum pressures as the Thunder Bay system reaches its capacity. Please discuss if new customers additions may be enabled by increased capacity of the replacement pipeline, and if so, what is the estimated potential for new customer additions.

**Response:**

The pipeline from the Onion Lake Pressure Control Station to the Belrose Town Border Station is a 17 km 10"ST line with a MOP of 6895kPa. The southern half of Thunder Bay (formerly known as Fort William) is fed from the Belrose Station. During peak winter conditions this line is over capacity, not meeting the minimum inlet pressure into the major stations feeding Fort William. In order to increase the pressure into the major distribution station, the 10" loop line needs to be upsized.

Union Gas considered a 16" line which provides adequate pressure to meet existing demands as well as extra capacity on the system upwards of 100,000m<sup>3</sup>/h. This extra capacity is not required at this time as organic town growth and contracted demands are not forecasted in this magnitude.

An increase in pipe size to 12" (the next pipe size up from 10") will solve the low pressure issues anticipated on peak temperature design days. The increased pipe size will provide an additional 24000m<sup>3</sup>/h extra capacity for organic system growth. This translates to approximately 3200 residential houses; however the number of customers is dependent on location and customer type.

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4. Reference: Prefiled Evidence/ pages 11-12/paragraph 60; Prefiled Evidence/Schedule 9, "Pipeline Abandonment Checklist"; Prefiled Evidence/Schedule 10, "Specifications for Rock Excavation"
- a) Please describe the steps in construction of the proposed replacement pipeline indicating the abandonment approach and if blasting may be required.
  - b) For sections of the replaced NPS 10 pipeline that will be removed, please describe the land restoration and monitoring program along with the mitigation plan to address impacts such as soils subsidence.
  - c) For the sections of the replaced NPS 10 pipeline that will be abandoned in-place, please discuss how Union will fulfill each of the requirements outlined in the TSSA Pipeline Abandonment Checklist.
  - d) For construction of the replacement pipeline where excavation or blasting may be needed, please confirm that Union will follow the specifications set in the Schedule 10 of the prefiled evidence

**Response:**

- a) In areas where the pipe will be abandoned Union will follow the TSSA Pipeline Abandonment Checklist as more fully described in the answer to c) below. Each section of abandoned pipe will be capped at each end and completely filled with concrete grout from the low end.

Blasting will be required in areas of bedrock where the trench excavated for the existing NPS 10 pipe is insufficiently large for the new NPS 12 pipe. The exact location and extent of these locations will not be known until the existing pipe is removed.

The steps in construction of the proposed replacement pipeline generally remain unchanged from those described in Paragraph 60 of the Prefiled Evidence. The paragraph has been updated to include references to the revised pipe sizes:

The prime construction contractor will mobilize to the area. New NPS 12 pipe will arrive to the area via truck will be off-loaded and stock-piled. Access roads will be constructed to gain entry and to clear and grade both the easement and temporary land use areas as required. Any topsoil and/or duff will be pushed to the easement edge or into the temporary land use areas for later replacement. Clearing along road allowance will also be required. The existing NPS 10 pipeline will be cleaned using a cleaning pig to remove debris from inside the pipeline. The existing trench will be excavated, exposing the existing pipeline.

The spoil material will be placed onto the easement, separate from the topsoil and duff. The existing NPS 10 pipeline will be removed from the trench, cut into 18 m long sections and trucked off site. The trench will be backfilled. Some existing sections of pipe within road allowance will be abandoned in place. These abandoned sections will be capped and filled with grout. Stringing trucks will deliver the NPS 12 pipe. The pipeline will then be welded, x-rayed, coated and bending will take place as required. For the majority of the replacement, the trenching crew will excavate the existing trench, making it wider and deeper as needed to accommodate the NPS 12 pipeline. Some blasting or hoe ramming may be required. Spoil will again be placed, separate from the topsoil and duff. The welded pipe will be lowered into the trench. Sand-padding, sack-breakers and swamp weights will be installed as needed given the ground conditions. The trench will be backfilled. Watercourse crossings and road crossings will be an open cut installation. Dawson Road will be a rock bore. Welding crews will complete all tie-ins of trenched, open-cut and bored sections. The continuous pipeline will then be cleaned; caliper pigged, hydrostatically tested and dried. Final tie-ins will be completed at Onion Lake station and Belrose station and the pipeline placed into service. Final clean up of the easement and the road allowance will be completed.

- b) The new NPS 12 pipeline will be installed in the same alignment as the existing NPS 10 pipeline everywhere except where the existing line will be abandoned and one 220 m long location along Paquette Road, where the alignment will move from the north to the south side of the road to increase offset from existing dwellings. For all disturbed areas, whether over the new NPS 12 pipeline trench or over the removed NPS 10 trench, the same procedure will be used.

Once the pipeline has been installed the trench will be backfilled and compacted using native material. Sand padding may be required in some areas where suitable native material is not available. The area over the new NPS 12 pipeline trench will be crowned to accommodate subsidence should it occur. Areas of disturbance will be reseeded with particular attention to areas with the potential for erosion and around watercourses. The entire right-of-way will be reviewed by the contractor and the environmental inspector prior to crews leaving the project in 2013. The entire right-of-way will again be reviewed by the Contractor and Union in the spring of 2014 to determine if any additional clean-up is required. The right of way is reviewed for subsidence, erosion or any other issues that may need attention.

- c) The following provides an item by item account of how Union will fulfill the requirements of the TSSA Pipeline Abandonment Checklist.

## PLANNING

1. Has subsidence been considered for pipelines having a diameter greater than 323.9 mm (12 inches)?

N/A – pipe to be abandoned is NPS 10.

2. Has the pipeline company notified the landowners and proper authorities (municipalities, MOE, MTO, MNR, etc.) of the abandonment?

Landowners and Authorities have been notified.

3. Have abandonment procedures for crossings been agreed upon by utilities (road, railway, pipelines, etc.) and authorities responsible for rivers and streams crossed by the pipeline?

Written approvals are in the process of being obtained.

4. Has consideration been given to the effect of drainage in the area surrounding the abandoned pipeline which may act as a conduit for ground water after the pipe is perforated by corrosion?

The pipe will be filled with grout, so it will not act as a conduit.

5. Has consideration been given to the removal of all the aboveground facilities?

No aboveground facilities are associated with the sections of pipe to be abandoned.

6. Has consideration been given to any hazards posed to people, equipment, wildlife or livestock by any apparatus left in place above or underground?

Since the pipe will be within road allowance and there are not aboveground facilities, no hazard will be posed.

## IMPLEMENTATION

1. Has the abandoned pipeline been physically isolated from the live pipeline?

Yes

2. Has the pipeline been drained of all fluids and adequately cleaned to prevent ground water contamination from hydrocarbon residue on the pipe wall after the pipe is perforated by corrosion?

The pipe will be pigged and filled with grout prior to abandonment. The pipe is coated with yellow jacket polyurethane and poses no hazard to the environment.



3. Have all aboveground facilities been removed and has consideration been given to removing underground facilities such as anode beds and tanks?

No aboveground facilities, anode beds or tanks are associated with the sections of pipe to be abandoned.

#### LIABILITY/RISK MANAGEMENT

1. Does the pipeline company have a contingency plan to remedy any contamination caused by the abandoned pipeline?

The pipe will be pigged and filled with grout prior to abandonment. The pipe is coated with yellow jacket polyurethane and poses no hazard to the environment.

2. Has consideration been given to conducting post-abandonment surveillance programs?

The abandoned pipe will remain adjacent to the new NPS 12 pipeline and will be observed along with the operating NPS 12 pipeline.

3. Has consideration been given to maintaining signage after the pipeline is abandoned?

Since the abandoned pipe will be within road allowances, signage will not be maintained.

4. Has consideration been given to providing a locate service after the pipeline is abandoned?

Abandoned pipelines remain within the Union Gas GIS system and this information will be available to line locators operating under the Ontario One Call system.

d) Union confirms the specifications set in Schedule 10 of the prefiled evidence will be followed.

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5. Reference: Revised Application, dated November 19, 2012; Prefiled Evidence/ page 18/paragraphs 90 and 95

Please provide an update on any ongoing negotiations with affected landowners along the replacement route and indicate the permanent and temporary easements acquired or to be acquired for construction of the replacement project.

What is the status of negotiations with the one landowner with whom Union did not reach an agreement at the time of filing the revised application?

**Response:**

Union has been able to acquire Temporary and Permanent Easements from all directly affected landowners along the pipeline route, except for one.

Union has revised its offer to the one remaining unsigned landowner, whereby the pipeline would be moved to road allowance and it would only be necessary to obtain Temporary Land Rights on his property. Union continues to negotiate acceptable terms for Temporary Land Use consisting of 9.0m x 40m (0.036ha). Union is confident with the current round of negotiations and feels it will be able to reach an agreement over the coming weeks.

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6. Please comment on the attached Board staff draft conditions of approval. Please note that these conditions are standard conditions and are a draft version subject to additions or changes depending Board staff's further review of the evidence in this case.

**Board Staff Proposed Draft**

**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-2012-0226 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, 2013, 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, Enbridge 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 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:
- a) the actual capital costs of the project and an explanation for any significant variances from the estimates filed in this proceeding.

**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.

Enbridge 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 Other Approvals and Agreements**

- 4.1 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.

**Response:**

Union has no concerns with the proposed Conditions of Approval.