

May 27, 2015

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”)
Sudbury Expansion Project
Board File # EB-2015-0120**

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

Sincerely,

[original signed by]

Shelley Bechard
Administrative Analyst, Regulatory Projects

Encl.

cc: Pascale Duguay, Ontario Energy Board
Colin Schuch, Ontario Energy Board
Zora Crnojacki, OPCC
Shelley Grice, Econalysis Consulting Services
Roger Higgin, Sustainable Planning Associates Inc.
David MacIntos, Energy Probe Research Foundation
Ian Mondrow, Gowling Lafleur Henderson LLP
Shahrzad Rahbar, Industrial Gas Users Association

UNION GAS LIMITED

Answers to Interrogatories from
Board Staff

1. Ref: Evidence Page 2 of 21, paragraph 7

Preamble:

Union plans to construct the proposed facilities during the summer 2015 season in order to construct the pipeline during favourable weather conditions. Therefore, Union requests the timely approval of this application by July 2015.

Question:

What would be the consequences if the application is approved in August or September 2015?

Response:

Victoria Mine requires an in service date for proposed pipeline of September 2015 to meet plant requirements for winter 2015/16. If the application is not approved until August or September, the in-service date for Victoria Mine could not be met.

In the event that approval is delayed Union would work with the two pipeline contractors to complete the project as soon as possible. If construction continued into the winter there would be additional costs incurred due to a winter construction premium which takes into account shorter days, adverse weather conditions and a decrease in productivity.

2. Ref: Evidence Page 8 of 21, paragraph 32

Preamble:

In its evidence, Union has indicated that a portion of the proposed project estimated at \$4.2 million is attributed to system reinforcement and general service growth in the City of Greater Sudbury.

Question:

- a) Is Union aware of any future large industrial or mining projects that could lead to further constraints in the distribution system after the proposed project is completed and in service?
- b) If yes, please provide a detailed response including timelines and Union's approach to dealing with future system constraints.

Response:

Union is aware of other potential industrial projects that could lead to further expansion of the Sudbury system. Of those potential projects, progression has not reached a commitment level in terms of providing the specifics outlined which would trigger the planning for construction. As a result, no future growth from other industrial customers has been incorporated into this filing. Union is working with a group of IGUA members to obtain the information required to complete the process identified below.

Union Gas expands the natural gas distribution system in accordance with EBO 188 which establishes the criteria required for expansion of natural gas distribution system and required economics of those expansion projects.

Union evaluates system expansion requirements for contract rate customers on a customer by customer basis as requests for new or expanded services are received. To begin the evaluation process, Union requires information from the customer that includes at a minimum, the in-service date, peak hourly gas demand, and delivery pressure requirements. More information may be required depending on the circumstances.

Once the above information is received, Union then determines if the current facilities can support the request or if additional facilities are required. If additional facilities are required, Union then prepares a feasibility estimate for the work. Once this is shared with the customer and Union receives confirmation that the customer wishes to further proceed with the project, a budget level estimate for the work required is completed. Any capital contribution requirements would be determined at this time.

With this information in hand the customer can determine if they wish the project to move forward. If the customer notified Union that they desired to proceed with the project, a contractual and financial commitment is entered between the two parties. With appropriate agreements in place, Union would commence the planning and construction of the required facilities.

3. Ref: Evidence Page 9 of 21, paragraph 37

Preamble:

Union Gas Limited (Union) has indicated that a capital contribution of \$4.7 million will be required to serve the FNX Victoria Mine.

Question:

- a) Will there be an impact on the capital contribution to be paid by FNX Victoria Mine in case of the project being over budget due to a delay in completion or some other reason?
- b) If yes, please explain how the additional costs will impact the capital contribution amount to be paid by FNX Victoria Mine.

Response:

The capital contribution from FNX will increase if the OEB has not made a decision on Union's Leave to Construct application by July 1, 2015. Union will reevaluate construction costs if the in-service date is delayed into winter construction conditions.

Union's construction estimate has standard construction contingencies to account for delays in completion due to weather or other expected uncontrolled elements. Winter construction costs have not been evaluated as part of the current cost estimate.

4. Ref: Evidence Page 11 of 21, paragraph 45

Preamble:

Union has noted that in 2000, it replaced the pipeline between Froot and Azilda with an NPS 12 pipeline adjacent to the existing pipeline. Union abandoned the existing pipeline in place.

Question:

Why did Union abandon the existing pipeline?

Response:

Please find attached as Schedule 1 it is an interrogatory response from the RP-2000-0013 proceeding that explains why the NPS 10 pipeline was abandoned in 2000.

5. Ref: Schedule 2

Preamble:

In the letter of support from FNX Victoria Mine, it is stated that the mining company is presently negotiating with Union Gas for a supply contract that will be signed no later than May 2015.

Question:

Please confirm whether Union has entered into a supply contract with FNX Victoria Mine. If the contract has not been entered into, please provide the estimated timeline for entering into a contract with the mining company.

Response:

Union Gas is currently negotiating a contract with FNX Victoria Mine. Union anticipates a contract will be signed by June 15, 2015.

6. Ref: Evidence page 15, paragraph 62

Preamble:

According to Union, an Environmental Protection Plan (EPP) has been submitted to the Ontario Pipeline Coordinating Committee (OPCC), local municipalities, the Conservation Sudbury, First Nations and Metis. Union stated that a summary of comments from these parties and Union's responses will be filed when received as Schedule 15.

Question:

Please file a summary of comments and concerns received to date and Union's responses and planned actions to mitigate each of the issues and address each of the concerns.

Response:

Please find attached as Schedule 2 a summary table and the letters received and responses to the OPCC Review.

7. Ref: Evidence page 17, paragraph 71

Preamble:

Union has indicated that it will have to acquire crossing permits or agreements with the Municipalities, Conservation Sudbury, railways and other utilities along the proposed pipelines.

Question:

What is the status of the permits and agreements Union needs to complete the construction of the project?

Response:

Union Gas is responsible in obtaining an Encroachment Agreement from Hydro One Networks Inc. The Construction and Encroachment Agreement from Hydro One Networks Inc. was received May 8, 2015.

Union Gas requires a permit from Conservation Sudbury. Union has met with and discussed the project with Conservation Sudbury and will be making an application in early June and expects to receive approval by July 1, 2015.

8. Ref: Evidence page 17, paragraph 74

Preamble:

For the location of the Froid to LaSalle Road section of the pipeline Union needs permanent and temporary land rights for permanent easement from Vale Canada Limited.

Question:

Please describe the prospects of acquiring all of the permanent and temporary land rights from Vale Canada Limited in time to adhere to the planned construction schedule for the pipeline.

Response:

A Pipeline Easement and a Temporary Land Use Agreement has been executed by Vale Canada Limited.

9. Ref: Evidence page 20, paragraphs 85 and 86

Preamble:

Regarding First Nations and Metis Nations consultation, Union indicated that it notified by letter First Nations potentially affected by the project. Union also stated that it would continue to consult with the First Nations and Metis organizations.

Question:

Please provide an update on Aboriginal consultation undertaken since the application was filed. Identify any concerns raised in the consultation and describe how is Union planning to address the concerns raised by First Nations and Metis affected by the proposed project.

Response:

Union notified by letter First Nations and Métis Nations potentially affected by the project. Union stated that it would continue to consult with the First Nations organizations and Métis Nation of Ontario.

Union Gas met with the two First Nations, Whanapitaie First Nation, and Whitefish First Nation on March 10, 2015 to explain the project and discuss potential impacts.

- The Environmental Report was reviewed, and a copy provided to the Whanapitaie First Nation, and Whitefish First Nation.
- The Whanapitaie First Nation, and Whitefish First Nation raised questions with regards to water crossings which Union Gas addressed to their satisfaction.
- Union Gas has agreed to continue to provide Whanapitaie First Nation, and Whitefish First Nation with any updates to the project.

On April 14, 2015 Union Gas met with Region 5 Consultation Committee of the Métis Nation of Ontario to consult on the project. The Environmental Report was made available to the Committee prior to our meeting.

- The committee raised questions on procedures regarding water crossings which Union Gas addressed to their satisfaction.
- Union Gas responded to the questions of Region 5 Consultation Committee of the Métis Nation of Ontario and they were satisfied with the explanation. Union Gas has agreed to provide Region 5 Consultation Committee of the Métis Nation of Ontario with any updates to the project.

10. Ref: Evidence page 1, paragraph 1

Preamble:

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

Question:

If Union does not agree to any of the draft conditions of approval noted below, please identify the specific conditions that Union disagrees with and explain why.

For conditions that Union does not accept or would like to recommend minor changes, please provide the proposed changes.

Response:

Union can accept the Conditions of Approval, with the following clarification.

It is Union's understanding of Condition 4, that Union will notify and request approval of the Board if any of the following changes are proposed, to the Board-approved construction or restoration procedures:

- New permanent Land Rights are required
- Changes to the Design and Pipe Specification schedule
- Changes to the Construction and/or Restoration techniques
- Change to any of the Environmental Protection mitigation measures identified in the Environmental Report
- For pipelines located within a road allowance
 - If the pipeline is to be constructed on a road not previously identified or will not be constructed on a road previously identified
- Changes to which pipeline is to be abandoned or the abandonment techniques
- Changes in construction and/or restoration procedures as a result of consultation with; the Ontario Pipeline Coordinating Committee, a Municipality, an Agency, and with First Nations or Métis Nation

UNION GAS LIMITED

Answers to Interrogatories from
Energy Probe

1. Ref: Evidence Page 1, Paragraph 2

Preamble:

Please discuss the current status of Union's Distribution Contract with FNX Victoria Mine for the proposed facilities and identify any key issues that could impact i) negotiations and ii) the project schedule.

Response:

Please see Union's Response to Board Staff Interrogatories 1 and 5

2. Ref: Evidence Page 1, Paragraph 3

Preamble:

Please explain and discuss further the growth over the past several years and forecast growth related to residential, commercial and industrial segments on the Sudbury system.

Response:

The table below summarizes Sudbury attachments by area from 2004 to 2013 for residential and commercial/industrial customers. This information was used to determine the average historic customer attachment rates. The historic attachment rate of 1.3% on average for the Sudbury system, as outlined on page 3 paragraph 13 of the prefilled evidence, was used to predict the future attachment rates for the regular rate market. As industrial and commercial customer attachments cannot easily be predicted, we analysed each area for historic trends, however, each customer would be treated as outlined in Board Staff Interrogatory 2.

Sudbury System Historical Growth – 10 Year Review by Area (2004-2013)

Area (Subsystem)	Customer Type	Number of Customer Attachments per Year										Average Customers Attached per Year	Total Customers per Area	Percent Growth per Year
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Hammer	Residential	39	41	21	45	32	33	30	45	41	20	34.7	3,315	1.01
	Commercial/Industrial	0	1	2	2	4	2	2	7	2	0	2.2	127	0.06
	Total	39	42	23	47	36	35	32	52	43	20	36.9	3,442	1.07
Val Therese	Residential	58	60	54	88	53	34	40	46	32	19	48.4	2,923	1.61
	Commercial/Industrial	0	0	5	1	1	0	0	1	2	0	1.0	87	0.03
	Total	58	60	59	89	54	34	40	47	34	19	49.4	3,010	1.64
Val Caron	Residential	37	35	51	53	58	44	67	64	39	34	48.2	2,449	1.82
	Commercial/Industrial	3	6	5	3	1	1	0	5	5	1	3.0	197	0.11
	Total	40	41	56	56	59	45	67	69	44	35	51.2	2,646	1.93
Azilda	Residential	17	12	21	20	30	30	22	31	29	28	24.0	1,539	1.49
	Commercial/Industrial	1	0	1	1	1	0	4	0	1	1	1.0	72	0.06
	Total	18	12	22	21	31	30	26	31	30	29	25.0	1,611	1.55
Chelmsford	Residential	39	38	38	54	85	39	43	61	70	58	52.5	3,724	1.30
	Commercial/Industrial	4	6	6	2	2	5	3	1	1	1	3.1	302	0.08
	Total	43	44	44	56	87	44	46	62	71	59	55.6	4,026	1.38
Espanola	Residential	16	8	9	13	14	9	19	21	11	20	14.0	1,429	0.87
	Commercial/Industrial	1	5	3	2	3	1	0	1	2	2	2.0	174	0.12
	Total	17	13	12	15	17	10	19	22	13	22	16.0	1,603	1.00
Nairn	Residential	1	1	3	1	2	1	2	2	0	1	1.4	104	1.35
	Commercial/Industrial	0	0	0	0	0	0	0	0	0	0	0.0	0	0.00
	Total	1	1	3	1	2	1	2	2	0	1	1.4	104	1.35
Walden/Whitefish	Residential	47	43	52	71	52	17	24	39	26	31	40.2	3,590	1.03
	Commercial/Industrial	3	6	3	6	6	2	3	6	5	2	4.2	312	0.11
	Total	50	49	55	77	58	19	27	45	31	33	44.4	3,902	1.14
Sudbury	Residential	355	303	313	366	395	262	292	472	420	251	342.9	26,074	1.17
	Commercial/Industrial	47	52	33	29	16	25	41	25	29	12	30.9	3,144	0.11
	Total	402	355	346	395	411	287	333	497	449	263	373.8	29,218	1.28
Coniston	Residential	10	12	5	15	20	8	12	15	15	11	12.3	1,422	0.82
	Commercial/Industrial	0	0	0	1	1	1	0	0	0	0	0.3	86	0.02
	Total	10	12	5	16	21	9	12	15	15	11	12.6	1,508	0.84
Grand Total		678	629	625	773	776	514	604	842	730	492	666.3	51,070	1.30

3. Ref: Evidence Page 12, Paragraph 49
- a) Please provide the anticipated metres of bedrock along the proposed route.
 - b) Please provide Union's assumptions regarding the percentage of bedrock that will require blasting compared to mechanical removal.
 - c) Please compare mechanical removal costs per metre to blasting.

Response:

- (a/b) Union anticipates blasting approximately 345 meters of bedrock along Crean Hill Road, which is the running line for the NPS 6 service lateral to Victoria Mine. Union will remove approximately 33 meters of bedrock by blasting when it constructs a tie-over between the new NPS 12 pipeline and the existing NPS 12 pipeline between Frood Road and Lasalle. Union anticipates the removal of a small amount of bedrock by mechanical means in the existing easement where the abandoned NPS 10 line will be removed and replaced with the new NPS 12 line.
- (c) For long stretches of bedrock (i.e., Crean Hill Road) blasting is more cost effective because it requires considerably less time. For short sections of bedrock, such as the case where Union needs to widen and straighten the existing trench where the abandoned NPS 10 line will be replaced with a NPS 12 line, mechanical means is the more cost effective method. Union's capital cost estimate for blasting is in the range of approximately \$600-650/meter.

4. Ref: Evidence Page 13, Paragraph 50

Construction of the Proposed Facilities is expected to begin in July 2015 with in-service dates for the pipeline serving the FNX Victoria Mine of September 2015 and in-service dates for the other facilities of December 2015.

- a) In Union's view, which issues pose the largest threat to the existing schedule and project costs?
- b) Please confirm the party that will undertake the construction work.

Response:

- (a) Please see Union's Response to Board Staff Interrogatory #1.

The City of Greater Sudbury is making road improvements to Crean Hill Road. Union's proposal is to construct the proposed pipeline within the road allowance after the road improvements have taken place. The City of Greater Sudbury has not completed the road improvements at this time and until the road improvements have been completed Union will not be able to install the NPS 6 service lateral to Victoria Mine.

- (b) Aecon Utilities and Link Line will be the construction contractors for the Sudbury Expansion Project.

5. Ref: Evidence Page 15, Paragraph 62

The evidence indicates a copy of the EPP was submitted to the Ontario Pipeline Coordination Committee (OPCC) on March 11, 2015 and copies were also sent to local municipalities, the Conservation Sudbury, First Nations, Metis and upon request, to interested parties. A summary of the comments and Union's response to concerns from agencies and interested parties will be filed, when received, as Schedule 15.

- a) Please confirm when Union expects to have comments back from the OPCC and the other agencies and interested parties listed.
- b) Please identify any issues raised by the parties to date.

Response:

Please see Union's Responses to Board Staff Interrogatory #6

6. Ref: Evidence Page 16, Paragraph 68
- a) Please confirm the portion of the pipeline that will be constructed within Union's existing easement and the portion of the pipeline that will be constructed in the new easement.
 - b) Please explain the need for the temporary lands required along the route of the proposed facilities.
-

Response:

- a) Approximately 1550 m of pipeline will be constructed within Union's existing easement. Approximately 33 m of pipeline will be constructed within the new easement.
- b) Temporary land is required to allow room for construction equipment to access the running line, pile material removed from the trench, string out pipe alongside the trench, and stock pipe granular back fill material.

7. Ref: Evidence Page 17, Paragraph 73

Union has met or spoken with all of the directly affected landowners along the Proposed Facilities route.

- a) Please confirm the number of directly affected landowners along each route.
- b) Please discuss any issues and/or concerns raised by the directly affected landowners and Union's response.
- c) Please discuss any project refinements as a result of landowner consultations.
- d) Please discuss if there are any outstanding landowner matters.

Response:

- a) The only directly affected landowner is Vale Canada Limited. All other pipelines will be constructed within road allowance in the City of Greater Sudbury under Union's franchise agreement.
- b) There have been no issues and/or concerns raised by Vale Canada Limited.
- c) There have been no project refinements as a result of landowner consultations.
- d) There are no outstanding landowner matters.

8. Ref: Evidence Page 19, Paragraph 79

Union indicates it has implemented a comprehensive program to provide landowners, tenants and other interested persons with information regarding the Proposed Facilities.

- a) Please provide details of Union' comprehensive program and how it plans to keep residents informed of the project plans, construction and mitigation activities.
- b) Please outline Union's Plan to provide its consultation notes as part of the public record in this proceeding.

Response:

Union's land agent has met with the only directly affected landowner, Vale Canada Limited, impacted by the construction of the project to advise them of the construction schedule, land impacts and to answer any questions which they may have. They have been provided with the contact information for the land agent and are able to contact them directly at any time during construction.

As described in paragraph 80 of Union's pre-filed evidence, Union will be utilizing the Complaint Resolution System, to record, monitor and ensure follow-up and communication back to the landowner for any compliant or issue received by Union during construction of the facilities.

After construction of the facilities the land agent will meet again with Vale Canada Limited to ensure that any issues during construction are settled and ensure payment for any damages that were not foreseen or compensated for prior to construction.

9. Ref: Evidence Page 20, Paragraph 85
- a) Please provide a copy of the letter regarding the Project that was provided to First Nations and Metis organizations.
 - b) Please discuss if Union has met with any First Nations and Metis organizations to date. If not, why not?
 - c) Please provide a summary of any issues and/or concerns raised by First Nations and Metis organizations to date and Union's response.
 - d) Please discuss any project refinements as a result of any consultations.
 - e) Please provide Union's future plan to meet with First Nations and Metis organizations pre construction.
-

Response:

Please see Union's Response to Board Staff Interrogatory #9.

10. Ref: Evidence Page 21, Paragraph 88

Please provide the status of the archaeological assessments for the project and the estimated date of completion.

Response:

The archaeological assessments required for the project have been initiated and will be completed by June 30, 2015.

11. Ref: Evidence Schedule 4, Pipeline Costs

The construction and labour costs per metre to lay NPS 10 is approximately 80% more than the cost to lay NPS 6. Please explain.

Response:

Construction and labour costs are higher to install NPS 10 in comparison to NPS 6 for the following reasons:

- Sections of the NPS 10 running line will be horizontal directionally drilled in comparison to the NPS 6 line which will be an open-cut installation.
- The NPS 10 line will be installed at a greater depth to eliminate conflicts with future road widening and ditching.
- Larger diameter pipelines require more labour and equipment for all construction activities due to the additional size, weight, and amount of welding.

12. Ref: Evidence Schedule 5, Station Capital Costs

The contingencies for Stations Capital Costs are approximately 10% whereas the contingencies for Pipeline Costs are 15%. Please explain.

Response:

Station capital costs have a lower contingency amount than pipeline capital costs because station construction is a more controlled environment that is confined to a smaller area. As a result, there is lower probability for weather and ground conditions to impact the capital costs.

13. Ref: (1) Evidence Page 9, Paragraph 40 & (2) Schedule 7
- a) Ref 1: Please provide the PI calculation estimated to be at 1.20 and 1.41, respectively.
- b) Ref 2: Please provide references and discuss the derivation of the Discount Rate of 5.28% and Change in Working Capital of 5.0513% applied to O&M.

Response:

a) The PI calculations are as follows:

<u>(\$000's)</u>	<u>New Business Investment Portfolio</u>	<u>Rolling PI</u>
NPV of Cash Inflows – Before Sudbury Expansion	\$71,099	\$49,519
Add: NPV of Sudbury Expansion Cash Inflows	<u>1,875</u>	<u>1,875</u>
Total NPV of Cash Inflows - (A)	<u>\$72,974</u>	<u>\$51,394</u>
NPV of Cash Outflows – Before Sudbury Expansion	\$58,666	\$34,248
Add: NPV of Sudbury Expansion Cash Outflows	<u>2,296</u>	<u>2,296</u>
Total NPV of Cash Outflows - (B)	<u>\$60,962</u>	<u>\$36,544</u>
Total PI - (A) / (B)	<u>1.20</u>	<u>1.41</u>

The new business investment portfolio includes the cash inflows and outflows associated with all new distribution customers who are forecast to attach in a particular year.

Union's rolling PI includes an accumulation of cash inflows and outflows from new business capital for the past 12-months Distribution Project Portfolio. The rolling PI is the cumulative PI data from the Rolling Project portfolio.

b) The Discount Rate of 5.28% is Union's estimated after tax weighted average cost of capital (WACC), and is calculated as follows:

<u>Description</u>	<u>Capital Structure %</u>	<u>After Tax Rate %</u>	<u>Return Component (d) = (b) x (c)</u>
(a)	(b)	(c)	
Long-term Debt	64%	3.23%	¹ 2.07%

¹ Represents Union's estimated cost of long-term debt of 4.40% less income tax at 26.5%, for an after tax cost of long term debt of 3.23%

Common Equity	36%	²	8.93%	³	<u>3.21%</u>
Total (Long-term Debt + Common Equity)					<u>5.28%</u>

The Change in Working Capital rate of 5.0513% is determined from Union's 2013 Rates proceeding (EB-2011-0210). The Board approved working capital allowance for O&M expenses of \$18,819 divided by total utility operating and maintenance expenses other than gas purchases costs of \$372,559. These amounts can be found in Union's evidence in the 2013 Rates Application (EB-2011-0210), Exhibit B3, Tab 3, Schedule 2, line 7 divided by line 4.

² 36% is the Board approved common equity component from the 2013 Rates Application (EB-2011-0210) – Decision and Order, October 24, 2012, page 48

³ 8.93% is the Board approved return on equity from the 2013 Rates Application (EB-2011-0210) – Decision and Rate Order, January 17, 2013, page 23

UNION GAS LIMITED

Answers to Interrogatories from
IGUA

1. Reference: Prefiled Evidence, page 4.

Preamble:

The table at the top of page 4 does not contain any units labels.

Questions:

- (a) Please file a copy of the table indicating what the numbers represent (i.e. providing the units represented).
- (b) If the table at the top of page 4 is not a table of volumes, please file a similarly structured table showing the growth in volumes over the period indicated in the existing table, including a "Percent Growth" column.

Response:

- (a) Please see Union's Response to Energy Probe Interrogatory #2
- (b) This table provides the residential and small commercial volume per year for the Sudbury Area.

Area (Subsystem)	Customer Type	Volume per Year (m ³ /hr)										Average Volume per Year (m ³ /hr)	Total Volume on subsystem (m ³ /hr)	Volume Percent Growth per Year
		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013			
Hammer	Residential	40.9	45.7	21.3	47.8	27.2	33.8	27.7	41.6	35.5	16.2	33.8	2,209	1.28
	Commercial/Industrial	0.0	1.5	2.5	4.3	6.4	13.1	55.7	10.8	3.0	0.0	9.7	436	0.37
	Total	40.9	47.2	23.8	52.1	33.6	46.9	83.4	52.4	38.5	16.2	43.5	2,645	1.64
Val Therese	Residential	67.5	71.0	61.5	92.0	57.4	38.8	43.3	46.5	35.0	17.0	53.0	3,056	1.51
	Commercial/Industrial	0.0	0.0	46.9	1.1	4.2	0.0	0.0	0.4	8.7	0.0	6.1	443	0.18
	Total	67.5	71.0	108.4	93.1	61.6	38.8	43.3	46.9	43.7	17.0	59.1	3,500	1.69
Val Caron	Residential	39.0	37.9	60.6	57.9	58.0	47.7	65.5	68.2	47.1	33.3	51.5	2,654	1.34
	Commercial/Industrial	18.4	23.8	14.4	15.2	1.7	4.7	0.0	15.2	11.0	1.0	10.5	1,192	0.27
	Total	57.3	61.7	75.1	73.1	59.7	52.4	65.5	83.4	58.1	34.3	62.1	3,847	1.61
Azilda	Residential	18.3	13.9	25.7	22.6	30.1	35.6	20.8	20.2	28.2	24.6	24.0	1,643	1.00
	Commercial/Industrial	24.7	0.0	6.3	1.1	7.1	0.0	25.4	0.0	15.2	1.6	8.1	754	0.34
	Total	43.0	13.9	32.0	23.7	37.2	35.6	46.2	20.2	43.4	26.2	32.1	2,398	1.34
Chelmsford	Residential	40.9	40.8	37.1	53.4	91.2	31.6	43.9	59.3	68.8	55.6	52.3	3,886	0.86
	Commercial/Industrial	11.8	40.2	31.7	36.1	3.5	23.5	114.0	2.4	11.2	1.7	27.6	2,209	0.45
	Total	52.8	81.0	68.8	89.5	94.7	55.1	157.9	61.7	80.0	57.3	79.9	6,095	1.31
Espanola	Residential	13.4	5.9	8.3	12.0	12.9	6.4	15.7	14.9	10.6	19.7	12.0	1,401	0.47
	Commercial/Industrial	0.8	7.6	7.1	5.6	2.6	6.2	0.0	2.3	5.4	6.7	4.4	1,127	0.18
	Total	14.2	13.5	15.5	17.5	15.5	12.6	15.7	17.2	16.0	26.4	16.4	2,528	0.65
Nairn	Residential	1.0	0.7	2.6	0.7	1.2	1.0	1.8	2.0	0.0	1.1	1.2	1,422	0.08
	Commercial/Industrial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	86	0.00
	Total	1.0	0.7	2.6	0.7	1.2	1.0	1.8	2.0	0.0	1.1	1.2	1,508	0.08
Walden/Whitefish	Residential	50.5	47.3	55.3	71.2	53.6	16.2	21.2	36.9	22.9	31.3	40.6	3,940	0.52
	Commercial/Industrial	20.7	26.9	135.7	112.7	127.4	16.4	18.0	63.5	125.7	15.4	66.2	3,916	0.84
	Total	71.2	74.2	191.0	183.9	181.0	32.6	39.2	100.4	148.6	46.7	106.9	7,857	1.36
Sudbury	Residential	393.2	348.9	338.7	374.9	384.6	243.0	269.9	719.7	372.7	252.0	369.8	30,510	0.64
	Commercial/Industrial	347.3	156.5	152.1	178.8	119.6	249.9	681.0	135.0	93.1	424.1	253.7	27,121	0.44
	Total	740.5	505.5	490.7	553.7	504.2	492.9	950.9	854.8	465.8	676.1	623.5	57,631	1.08
Coniston	Residential	12.4	13.0	5.8	14.0	19.9	7.6	11.1	15.9	15.2	10.5	12.5	1579	0.58
	Commercial/Industrial	0.0	0.0	0.0	7.8	3.1	19.7	0.0	0.0	0.0	0.0	3.1	573	0.14
	Total	12.4	13.0	5.8	21.7	23.0	27.3	11.1	15.9	15.2	10.5	15.6	2152	0.72
Grand Total		1101	882	1014	1109	1012	795	1415	1255	909	912	1040.3	90,160	1.15

2. Reference: Prefiled Evidence, page 4.

Preamble:

The evidence indicates that a fall of 2014 review of industrial customer consumption on the Sudbury system indicated that the system is operating below the minimum design specifications.

Questions:

- (a) Please indicate the number of customer service interruptions/curtailments (voluntary or otherwise) experienced on the Sudbury line during each of the last 5 winters (not including customer driven outages).
- (b) Please provide the design day and average day demands in aggregate on the Sudbury system during each of the last 5 winters, and Union’s forecast of these parameters for the next 5 winters.
- (c) Please provide the aggregate daily contract demand (CD), firm hourly quantity (FHQ) and maximum hourly quantity (MHQ) for the contract customers served by the Sudbury system for each of the last 5 winters, and Union’s forecast of these parameters for the next 5 winters.
- (d) Please provide the total current installed capacity available to serve customers of the Sudbury system.

Response:

(a) Over the past 5 winters the Sudbury system was only interrupted during the winter of 2014/15. There was one service interruption totaling 120 hours. Union does have a process to initiate communication with industrial customers in the event an interruption may be called. Any voluntary action taken on behalf of the customer to curtail operational are not tracked by Union Gas.

(b)

	Winter Design Day (51.9 HDD) Demands per Year in m ³ /hr									
	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Total	153,542	154,957	155,901	160,044	177,627	184,004	185,382	186,759	188,137	189,515

	Winter Average Day (27 HDD) Demands per Year in m ³ /hr									
	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020
Total	100,410	101,237	101,971	102,503	103,036	107,841	108,646	109,451	110,256	111,061

- (c) The chart below provides the aggregate daily contract demand (CD), firm hourly quantity (FHQ) and maximum hourly quantity (MHQ) for the contract customers served by the Sudbury system for each of the last 5 winters. Union declines to provide the forecast volumes for the next 3 years. This would identify the specifics of the Victoria Mine volumes which are commercially sensitive. Other potential industrial customers are not included in the forecast as negotiations have not progressed to appoint where commitments have been made to contract for natural gas services.

Contract Year (Winter of)	Actual Contracted					Forecast		
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
CD Rate 20 (firm) 10*3m*3	1,397	1,407	1,410	1,425	1,455			
CD Rate 25 Sales Interruptible 10*3m*3	1,030	1,030	1,027	1,042	555			
CD Rate 25 T Interruptible 10*3m*3	1,020	1,020	1,020	1,035	1,054			
MHQ m3	94,600	94,600	94,600	94,600	95,460			
FHQ m3 *	56,211	56,871	56,560	60,634	63,850			

* MHQ captures all contracts being served to evaluate system demands whereas some current contracts do not have an FHQ value until contract renewals.

- (d) The current installed capacity of the Sudbury System is 168,505 m³/hr.

3. **Reference:** Prefiled Evidence, page 5.

Preamble:

The evidence describes the configuration of the Sudbury system, and its evolution.

Question:

Please indicate the date of the last expansion of the system, and the incremental capacity resulting from that expansion.

Response:

The date of the last Sudbury Transmission expansion occurred in 2000. The incremental capacity as a result of this expansion and some station modifications is approximately 21,000 m³/hr.

4. **Reference:** Prefiled Evidence, page 6, paragraph 27.

Preamble:

The evidence indicates that the expansion for which approval is being sought will “*provide capacity for future growth to meet the needs of Union’s current industrial customers*”.

Question:

- (a) Please describe the process through which Union has assessed the future growth of Union’s current industrial customers.
- (b) Please indicate how much future growth (i.e. how much demand capacity) is provided for by the current project, in aggregate.
- (c) Please confirm that all anticipated future growth in the demands of Union’s current industrial customers of which Union is aware, including all requests made of Union for future capacity the precise volume of which is still being determined, has been provided for in the current expansion proposal. If this is not the case, please quantify approximately how much anticipated future growth has not been provided for and explain why.
- (d) Please indicate when it is anticipated that the Sudbury system will next be operating “*below the minimum design day specifications*” according to Union’s forecasts, after completion of the expansion which is the subject of this application.

Response:

- (a) Please see Union’s Responses to Board Staff#2
- (b) In aggregate the project provides 19,758 m³/hr of incremental capacity. Based on the commitments already made to the system and Union’s historic forecast, 5636 m³/hour of this capacity is available for future residential and small commercial growth starting in April 2015.
- (c) Please see Union’s Responses to Board Staff #2
- (d) The proposed expansion project will provide enough additional capacity to add FNX-Victoria Mine in 2015 and generic residential and small commercial growth to the winter of 2018/19.

5. Reference: Prefiled Evidence, page 7, paragraphs 29-30; page 8, paragraph 32.

Preamble:

Please provide the calculations to illustrate the allocation of capitals costs as between the FNX Victoria mine on the one hand, and system reinforcement and general service growth on the other hand.

Response:

The total capital costs are \$10,825,000:

- \$6,592,000 is attributed to FNX Victoria Mine, and
- \$4,233,000 is attributed to system reinforcement and general service growth.

The \$6,592,000 attributed to FNX Victoria Mine consists of:

- The station capital costs of \$624,000
- The capital costs for the NPS 6 service lateral of \$2,366,000
- 94% of the capital costs of the NPS 12 looping which is \$3,602,000

The \$4,233,000 attributed to system reinforcement and general service growth consists of:

- The capital costs for the NPS 10 pipe of \$3,985,000
- 6% of the capital costs of the NPS 12 looping which is \$248,000

RP-02000-0013
Interrogatory #1

UNION GAS LIMITED

Response to Interrogatory
from Board Staff

Facilities Business Plan, Market Demand and Need

Please elaborate on the integrity concerns of the pipeline to be replace. When was the specific section of pipeline that is to be replaced installed? Are there facilities in place for electronic pigging of the line?

Response

Surveys of this section of the line indicated areas of low cathodic protection. These areas were excavated and there was heavy pitting and evidence of corrosion. Over the past three (3) years approximately \$100,000 has been spent on excavating areas with the lowest cathodic protection levels and making temporary and permanent repairs as required.

The section of pipeline to be replaced was originally installed in 1958.

There are no facilities in place to allow for electronic pigging of the line.

Witness: David Francey
Date: May 18, 2000

OPCC Review Summary 2015

Sudbury Expansion Project

AGENCY	COMMENT	RESPONSE
May 1, 2015 Letter received by Azimuth City of Greater Sudbury David Shelsted Director of Roads and Transportation Services	Letter informs Union Gas that the City will provide comments on location and timing of construction, that an road occupancy permit will be required for work in the city road allowance and that a permit to take water may be required for the Ministry of the Environment for dam and pump crossing.	Not Required
February 18, 2015 Email sent from Roger Holmes Aquatic Biologist Azimuth Environmental Consulting To Eric Cobb District Planner Ministry of Natural Resources and Forestry, Sudbury Ontario.	Requesting information concerning Species at Risk (SAR) within the project area.	February 20, 2015 Email from Eric Cobb indicating the possible presence of SAR within the construction area.
May 7, 2015 Email sent from Eric Cobb District Planner Ministry of Natural Resources and Forestry, Sudbury, Ontario. To Paul Neals Vice President Azimuth Environmental Consulting	Comments pertaining to the Environmental Protection Plan (EPP) indicating that information pertaining to (SAR) and recommending that the Environmental Report (ER) within the EPP be amended.	May 21, 2015 Letter sent from Paul Neals to Eric Cobb responding to his SAR concerns and indicating the amendment of the ER.
A site meeting was conducted with Norm Dumouchelle Environmental Planner Union Gas Limited And Mike Hall Management Biologist Ministry of Natural resources and Forestry, Sudbury, Ontario	On site meeting at Crean Hill Rd. to discuss the location of the proposed pipeline and possible SAR. Following an explanation of the pipeline location, Mr. Hall indicated that he had no concerns with the SAR.	N/A



May 1st, 2015

Azimuth Environmental Consulting, Inc.
85 Bayfield St, Suite 400
Barrie, ON
L4M 3A7

Attention: Paul Neals

**Re: Environmental Protection – Union Gas Limited
Sudbury Expansion Project**

Dear Mr Neals:

This letter is in reference to your request for comments on the Environmental Report dated March 2015 by Azimuth Environmental Consulting, Inc. We have reviewed the report and have the following comments:

- The City of Greater Sudbury (CGS) will be providing comments regarding pipeline locations and construction timing directly to Union Gas.
- All work carried out in a CGS right-of-way requires a road occupancy permit and the CGS blasting specifications are to be followed. A copy of the CGS blasting specification should be requested at the time of application for the road occupancy permit.
- Proposed dam and pump construction techniques may require a Permit to Take Water from the Ministry of Environment. Union Gas will be responsible to obtain this permit if necessary.

If you have any questions or require any additional information, please do not hesitate to contact me.

Regards,

A handwritten signature in blue ink that reads 'David Shelsted'.

David Shelsted, MBA, P.Eng.
Director of Roads and Transportation Services

DS/lc

From: [Cobb, Eric \(MNRF\)](#)
To: [Roger Holmes](#)
Subject: RE: Background information request for proposed pipeline
Importance: High

Good Day Roger:

The biologist has completed his screening of your request to identify any relevant species and risk (SAR) and fisheries information:

Elm Street location (Figure 1)

- no SAR observations on record; also no fisheries information available on identified lake (surrounded by patented land)

Hwy 35 location (Figure 1)

- known Whip-poor-will habitat in area

Frood Rd. location (Figures 1 and 2)

- no known SAR observations

Victoria Mine Pipeline Installation (Figure 2)

- Blanding's turtle habitat identified in and around surrounding wetlands. Also, area is known to contain Eastern Whip-poor-will habitat

Falconbridge Rd. (Hwy 86) location (Figure 3)

- high potential for presence of Blanding's turtle in area , including movement/corridor habitat

Based on this information, you should make an assessment on whether the proposed activities will result in section 9 (harm/harass/kill) or section 10 (habitat damage/destruction) contraventions of the *Endangered Species Act* (ESA). If it is determined that the work will have an impact on any threatened or endangered species, then the proponent may be eligible for an authorization under the ESA.

Some general information you may want to consider when developing avoidance or mitigation measures:

- Whip-poor-will - Active/Nesting season is **May 1st to July 30th**
- Blanding's Turtle - Active period (includes basking, nesting and incubation activities) = **May 1st to September 30th** [based on local knowledge]
 - Overwintering period = **September 1st to May 15th** [based on local knowledge]

Regards,

Eric Cobb | District Planner | Ministry of Natural Resources and Forestry | Sudbury District | 3767 Highway 69 South, Suite 5, Sudbury, ON, P3G 1E7 | Tel: (705) 564-7876 | Fax: (705) 564-7879

From: Cobb, Eric (MNRF)
Sent: February 20, 2015 11:37 AM
To: 'Roger Holmes'
Subject: RE: Background information request for proposed pipeline

Eric Cobb | District Planner | Ministry of Natural Resources and Forestry | Sudbury District | 3767 Highway 69 South, Suite 5, Sudbury, ON, P3G 1E7 | Tel: (705) 564-7876 | Fax: (705) 564-7879

From: Roger Holmes [<mailto:rholmes@azimuthenvironmental.com>]
Sent: February 18, 2015 2:47 PM
To: Cobb, Eric (MNRF)
Subject: Background information request for proposed pipeline

Hello Eric,

I am currently working on an environmental report for a project in Sudbury that involves some pipeline work, and the proposed pipeline location crosses a lake in Sudbury (Section 2 of the attached figure – along Elm Street). The plans for the pipeline have not been finalized yet, but the current plan is to infill the section of the lake that the pipeline crosses. I am encouraging them to drill underneath, as I realize that infilling requires additional work and DFO approval.

I was wondering if you have any background information about this lake, and if it is a tailings pond for a nearby mine. The Sudbury official plan lists the lake as a wetland feature, which makes me question if it has been converted into a tailings pond. If you would like to discuss over the phone please give me a call.

I will also be requesting a species at risk screening for this project in the near future.

Thanks,

Roger Holmes, M.Sc.,
Aquatic Ecologist

Azimuth Environmental Consulting, Inc.
85 Bayfield Street, Suite 400
Barrie, Ontario
L4M 3A7

rholmes@azimuthenvironmental.com

t: (705) 721-8451 x203

f: (705) 721-8926

cell: (519) 717-8842

www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering

Please consider the environment before printing this correspondence

From: [Cobb, Eric \(MNRF\)](#)
To: [Paul Neals](#)
Subject: Sudbury Expansion Project - Union Gas Limited
Date: Thursday, May 07, 2015 2:12:33 PM
Attachments: [RE Background information request for proposed pipeline .msg](#)
Importance: High

Good Day Mr. Neals:

My apologies for submitting our comments on the environmental protection plan for the Sudbury Expansion Project beyond the requested date of May 1, 2015. Hopefully, it is not too late to take these points into consideration.

Environmental Protection Plan

-

Page 3, last paragraph in Section 2.0 – work permits from MNRF for watercourse crossings may also be required. However, I noted that this has been correctly acknowledged in Section 6.0 (page 5).

Environmental Report

-

Sections 3.5 (page 5), 4.5 (page 8), 5.5 (page 12) – The last paragraph in each of these sections states that MNRF was contacted for Species At Risk (SAR) screening assessment but no response was received. An e-mail was sent to Azimuth Environmental Consulting Inc. on March 11, 2014 identifying potential SAR concerns (see attached).

Based on the content provided in the e-mail from March 11, it is recommended that the environmental report is amended to reflect the SAR information, and that the environmental protection plan amended (if required) to describe how potential impacts to SAR and contraventions under the *Endangered Species Act (ESA)* can be avoided, or in situations where impacts cannot be avoided, identify the requirement to obtain the appropriate ESA authorizations.

If you have any questions, please feel free to contact me.

Regards,

Eric Cobb | District Planner | Ministry of Natural Resources and Forestry | Sudbury District |
3767 Highway 69 South, Suite 5, Sudbury, ON, P3G 1E7 | Tel: (705) 564-7876 | Fax: (705)
564-7879