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Bonnie Jean Adams Assistant Regulatory Coordinator

phone: (416) 495-6409 fax: (416) 495-6072

Email: bonnie.adams@enbridge.com

Wednesday March 26th, 2008

RECEIVED

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

Re:

Enbridge Gas Distribution Inc. ("Enbridge")

Tecumseh Storage Enhancement Project

EB-2007-0888/EB-2007-0889/EB-2007-0890 - Evidence

Enclosed, please find two copies for each proceeding of the following updated exhibit:

Exhibit A, Tab 1, Schedule 1,

Also enclosed please find two copies of additional evidence of the following exhibits:

Exhibit B, Tabs 3, Schedule 1-3

The application and evidence with the updated exhibits have been filed through the Ontario Energy Board's Regulatory Electronic Submission System (RESS).

The application and evidence will also be available on our website at

EB-2007-0889

www.enbridge.com/ratecase by Friday January 18, 2008.

Please contact the undersigned if you have any questions.

Yours truly,

Bonnie Jean Adams

Assistant Regulatory Coordinator

OEB BOARD SECRETARY

File No: SubFile: 1

Panel

Licensing John W.

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cc: EB-2007-0888/EB-2007-0889/EB-2007-0890 Interested Parties (via email)

Updated: 2008-03-26 EB-2007-0889 Exhibit A Tab 1 Schedule 1

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A - GENERAL

<u>Exhibit</u>	<u>Tab</u>	<u>Schedule</u>	Description
<u>A</u>	1	1	Table of Contents
	2	1	Application
		2	List of Interested Parties
	3	1	Project Description and Justification - Tecumseh Storage Enhancement Project
		2	Project Description - Vector Tie-In

B – ROUTING AND ENVIRONMENTAL

<u>Exhibit</u>	<u>Tab</u>	<u>Schedule</u>	<u>Description</u>
<u>B</u>	1	1	Route Description
		2	Alternative Routes
	2	1	Environmental Implementation Plan
		2	Environmental Screening Report
	3	1	Landowner Letter and Enbridge Response - Farm Stray Voltage
		2	TSSA Letters and Enbridge Response
		3	Correspondence between Landowner and Enbridge - Pipeline Construction
		4	Correspondence between MOE and Enbridge

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C - FACILITIES

<u>Exhibit</u>	<u>Tab</u>	Schedule	Contents
<u>C</u>	1	1	Design Specifications
2 2 1 <u>D – LAND ISSUES</u>		1	Hydrostatic Test Procedures Proposed Construction Schedule
Exhibit	<u>Tab</u>	<u>Schedule</u>	Contents
<u>D</u>	1	1	Land Requirements
		2	Permits Required
		3	Negotiations to Date
		4	Affidavit of Search of Title
		5	Form of Agreement to Grant and Easement Agreement
		4	Temporary Working Area Agreement
I - INTER	RROG	<u>ATORIES</u>	

Exhibit	<u>1 ab</u>	Schedules	Contents
1	1	1-7	Board Staff Interrogatories

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Filed: 2008-03-26 EB-2007-0889 Exhibit B Tab 3 Schedule 1 Page 1 of 3

Gas Storage Operations 3595 Tecumseh Road MOORETOWN ON NON 1M0 Terry Chupa C.I.M. Land Agent/Land Contracts Manager

Tel 519 862-6008 Fax 519 862-1168

Email terry.chupa@enbridge.com

January 15, 2008

File Number: L20-094

Chad Anderson 1327 Moore Line Mooretown, ON NON 1M0

Re: Farm Stray Voltage

Thank you for taking the time to meet with Harald Brecht, Brad Pilon and myself on December 14, 2007 to talk about your letter to us dated November 5, 2007 on the topic of farm stray voltage.

Hopefully you found the meeting as beneficial and informative as we did. The four of us talked about and questioned many aspects of farm stray voltage and related items in both general terms and as related specifically to our operations.

At the end of the meeting, we felt that the topic had been discussed to a reasonable level and that the items mentioned in your letter were addressed to your satisfaction.

As we talked about, attached please find a copy of your letter with Harald's responses inserted after each question.

Please feel free to contact me if you have any further questions or concerns on this matter.

Yours truly,

c/c

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Terry Chupa C.I.M.

Land Agent/Land Contracts Manager

Stephen Cain, Ontario Energy Board, 27th Floor, 2300 Yonge Street, Toronto, ON M4P 1E4 Neil Mckay, Ontario Energy Board, 27th Floor, 2300 Yonge Street, Toronto, ON M4P 1E4

2008-03-19 Page 2

> Chad Anderson 1327 Moore Line Mooretown, On. NON 1M0

Terry Chupa Land Administrator Gas Storage Operations Enbridge Gas Distribution Inc. 3595 Tecumseh Road Mooretown, On. NON 1M0

November 5, 2007

Dear Terry,

This evening I attended an information meeting in Wyoming, hosted by the Ontario Energy Board. The purpose was to publicly consult farmers around the issue of the directive by the provincial government to identify the relation of "tingle" or "stray" voltage on the electrical service to farm customers and how this impacts farming. I must admit this was quite an eveopening session for me, and I left the meeting with many concerns. One concern is around the natural gas pipeline infrastructure here in Lambton County. In one slide of the presentations given, pipelines are mentioned as a possible off farm source of stray voltage, while other people at the meeting told stories around such pipeline scenarios. I could not help but think back to our winter meeting, while in your boardroom attending a meeting as a committee member of the Kent Lambton Enbridge Storage Association (KLESA). One of the items we discussed at this meeting was your preferred route for the proposed Ladysmith 20 inch pipeline. Our committee was suspicious why Enbridge would choose a route through a more productive farming area while at the same time having an existing easement along the Hydro corridor where we felt the pipe was better placed. At that time you and Mr. Philon explained how the new route was chosen in-part due to stray voltage concerns with construction. Latter this summer I had the opportunity to sit in on negotiations as an observer with KLESA on the then preferred route where your project supervisor, Mr. Fairchilds commented there were countless papers on how it would be considered poor pipeline construction practices to install along a Hydro corridor. Then as we know, your company decided to change routes and return to the existing easement along the Hydro corridor. I have no place in suggesting where or where not to construct this new pipeline however I do have three questions to ask:

1> Given what I heard tonight and the fact that there are many residences in close proximity of your proposed route, has Enbridge given consideration to the possibility of stray voltage adversely affecting this community?

Rate Case OEB Enbridge Gas Distribution: EB-2007-0888-0889-0890 Tecumsch/Mailout/L20094-L-ChadAnderson-StrayVoltageLetterAndReply-R1.doc Crazed on 3/19/2008 10/49/08 AM B, Terry Chapa Re-wed 00/1908 10/49 AM Page 247

Enbridge Response

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- No. In our opinion the farm stray voltage being investigated by the OEB and the voltage that may be induced in a pipeline in close proximity to a high-voltage transmission line are not related. The public information released so far by the OEB does not address the issue of induced voltage. We will continue to monitor the OEB's investigation into FSV.
- 2> What construction protocols will reduce the possibility of this new pipeline being a vector for stray voltage?

Enbridge Response

- Enbridge will ensure that the Ladysmith pipeline meets or exceeds the design, operating & maintenance requirements required by Ontario's Oil and Gas Pipeline Systems regulation.
- 3> What measures are Enbridge willing to put in place to monitor whether or not there is stray voltage produced as a result of the proximity of the pipeline so close to major electrical transmission line?

Enbridge Response

• The design (which is currently underway) will include measures to ensure any induced voltage level is within the limits required by regulation. Enbridge's routine maintenance includes measuring the cathodic protection voltage level (used to prevent pipeline corrosion) which will also detect excessive stray voltage.

Regards,

Chad Anderson

Cc

Eugene Robbins, Mooretown Don McCabe, Ontario Federation of Agriculture Ted Cowan, Ontario Federation of Agriculture Stephen Cain, Ontario Energy Board David Core, CAPLA

Filed: 2008-03-26 EB-2007-0888 Exhibit B Tab 3 Schedule 2 Page 1 of 5



FUELS SAFETY DIVISION

Tel: (416) 325-1650 Fax: (416) 326-8248

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January 17, 2008 File: CF

Ms. Bonnie Jean Adams, Assistant Regulatory Coordinator Enbridge Gas Distribution Inc. 500 Consumers Road Toronto, ON M2J 1P8

Dear Ms. Adams:

Re: Tecumseh Storage Enhancement Project. Applications to the OEB EB-2007-0888, Sombra Line Extension, EB-2007-0889, Vector Tie-In and EB-2007-0890, Ladysmith Loop, County of Lambton.

We received from Harald Brecht, P.Eng. the information requested in our letter of December 24, 2007.

We reviewed the information submitted and the reports for these three projects attached to your letter and found it acceptable. The requirements of the CSA Z662-03 enforced by the Regulation on Oil and Gas Pipeline Systems (O. Reg. 210/01) are applicable to the design, construction, operation and maintenance of this pipeline. However, for establishing the Pipeline Integrity Management Program, you should be aware that TSSA will be adopting the new version of the CSA Z662 issued in 2007 by the end of March, 2008. Please keep in mind that the Ontario Guidelines for Locating New Oil and Gas Pipeline Facilities may apply to these projects and the location of the new lines should meet the Guidelines.

Should you have any questions, please call me.

Yours truly,

Osear Alonso, P. Eng. Fuels Safety Engineer

cc: Zora Crnojacki, Chair, OPCC, OEB

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Gas Storage Operations 3595 Tecumseh Road Mooretown, ON NON 1M0 519-862-1473 519-862-1168 fax Filed: 2008-03-26 EB-2007-0888 Exhibit B Tab 3 Schedule 2 Page 2 of 5



January 14, 2008

TSSA – Fuels Safety Division Attn: Mr. Oscar Alonso, P. Eng. 3300 Bloor Street West, 14th Floor Toronto, ON M8X 2X4

Dear Mr. Alonso:

Re: Tecumseh Storage Enhancement Project. Applications to the OEB EB-2007-0888, Sombra Line Extension; OEB EB-2007-0889 Vector Tie-in; OEB EB-2007-0890 Ladysmith Loop, County of Lambton.

This letter is in response to your December 24, 2007 request to Ms. Bonnie Jean Adams for additional information about Enbridge's Tecumseh Storage Enhancement Projects.

EB-2007-0888, Sombra Line Extension

This information is supplemental to that given in the Leave to Construct Evidence, Exhibit C, Tab 1, Schedule 1

Description	Application CSA Z662-03 Table 4.2 Class 1 General
Combined Design & Location Factor	0.8
Nominal Pipe Diameter (mm)	406.4
Design Pressure (kPa)	6 900
Hoop Stress at DP (% SMYS)	80
Maximum Operating Pressure (kPa)	6 900
Hoop Stress at MOP (% SMYS)	80
Operating Pressure Range (kPa)	2 070 - 4 830
Grade (MPa)	414
Minimum Wall Thickness (mm)	4.3
Fracture Category	11
Minimum Design Temperature (degC) Above Grade / Buried	M30 / M5
Maximum Design Temperature (degC)	120
Hydrostatic Test Pressure (kPa)	8 630
Estimated Length (m)	340

Filed: 2008-03-26 EB-2007-0888 Exhibit B Tab 3 Schedule 2 Page 3 of 5

Note that Hoop Stress is based on the minimum wall thickness and in all likelihood the actual wall thickness will exceed the minimum. The actual wall thickness will depend on pipe availability at the time it is ordered.

All pipe and components will meet the applicable CSA standard as listed on page 1, Schedule 1 of Exhibit C.

When operated in parallel with the Enbridge Gas Storage NPS 30 pipelines the Sombra Line Extension will be restricted to a maximum pressure of 6 450 kPa.

The final connection of the Sombra Line Extension to the Sombra Pipeline will be flanged and completed with the pipeline vented to atmosphere.

EB-2007-0889 Vector Tie-in

This information supplements that given in the Leave to Construct Evidence, Exhibit C, Tab 1, Schedule 1.

Description	Application CSA Z662-03 Table 4.2	
	Class 1	
	General	
Combined Design & Location Factor	0.8	
Nominal Pipe Diameter (mm)	406.4	
Design Pressure (kPa)	6 900	
Hoop Stress at DP (% SMYS)	80	
Maximum Operating Pressure (kPa)	6 900	
Hoop Stress at MOP (% SMYS)	80	
Operating Pressure Range (kPa)	4 480 - 5 170	
Grade (MPa)	414	
Minimum Wall Thickness (mm)	4.3	
Fracture Category	l II	
Minimum Design Temperature (degC)		
Above Grade / Buried	M30 / M5	
Maximum Design Temperature (degC)	120	
Hydrostatic Test Pressure (kPa)	8 630	
Estimated Length (m)	800	

Note that Hoop Stress is based on the minimum wall thickness and in all likelihood the actual wall thickness will exceed the minimum. The actual wall thickness will depend on pipe availability at the time it is ordered.

All pipe and components will meet the applicable CSA standard as listed on page 1, Schedule 1 of Exhibit C.

This segment connects to the Vector Pipeline which has a MOP of 6 900 kPa (1000 psig).

The final connection to the Vector Pipeline will be flanged and completed with the pipeline vented to atmosphere.

EB-2007-0890 Ladysmith Loop

This information supplements that given in the Leave to Construct Evidence, Exhibit C, Tab 1, Schedule 1.

Description	Application CSA Z662-03 Table 4.2		
Combined Design & Location Factor	0.8	0.6	
Nominal Pipe Diameter (mm)	508	508	
Design Pressure (kPa)	9 930	9 930	
Hoop Stress at DP (% SMYS)	80	60	
Maximum Operating Pressure (kPa)	9 930	9 930	
Hoop Stress at MOP (% SMYS)	80	60	
Operating Pressure Range (kPa)	2070 - 9240	2 070 - 9 240	
Grade (MPa)	414	414	
Minimum Wall Thickness (mm)	7.6	10.2	
Fracture Category	11	ll ll	
Minimum Design Temperature (degC) Above Grade / Buried	M30 / M5	M30 / M5	
Maximum Design Temperature (degC)	120	120	
Hydrostatic Test Pressure (kPa)	12 400	12 400	
Estimated Length (m)	4400	100	

Note that Hoop Stress is based on the minimum wall thickness and in all likelihood the actual wall thickness will exceed the minimum. The actual wall thickness will depend on pipe availability at the time it is ordered.

All pipe and components will meet the applicable CSA standard as listed on page 1, Schedule 1 of Exhibit C.

When operated in parallel with the Wilkesport Pipeline the Ladysmith Loop will be restricted to a maximum pressure of 9 200 kPa.

The final connection to the Wilkesport Pipeline will be flanged and completed with the pipeline vented to atmosphere.

Should you have any questions, please call me.

Yours truly.

Harald Brecht, P. Eng.

Manager, Engineering & Construction

Office: 519-862-6015 Cell: 519-331-8896

cc: Bonnie Jean Adams, EGDI

Filed: 2008-03-26 EB-2007-0888 Exhibit B Tab 3 Schedule 2 Page 5 of 5



Tel: (416) 325-1650 Fax: (416) 326-8248

December 24, 2007

File: CF

Ms. Bonnie Jean Adams, Assistant Regulatory Coordinator Enbridge Gas Distribution Inc. 500 Consumers Road Toronto, ON M2J 1P8

Dear Ms. Adams:

Re: Tecumseh Storage Enhancement Project. Applications to the OEB EB-2007-0888, Sombra Line Extension, EB-2007-0889, Vector Tie-In and EB-2007-0890, Ladysmith Loop, County of Lambton.

This is in response to the Notice of Application for the referenced project. We reviewed the information submitted, attached to your letter of December 11, 2007 regarding the construction of three pipeline segments and connection to existing lines.

Please provide the following additional information for the proposed sections of 16 and 20 -inch pipe:

- a) The maximum operating pressure (MOP) and design pressure (DP) for each segment;
- b) The hoop stress (% of SMYS) of each segment at MOP and DP;
- c) The technical specifications of pipe and components;
- d) The MOP for the existing lines to which the new segments will be connected, and
- e) The maximum pressure of the lines referenced in d) at the time the tic-ins will be performed.

Should you have any questions, please call me.

Yours truly

Osçar Alonso, P. Eng. Fuels Safety Engineer

cc: Zora Crnojacki, Chair, OPCC, OEB

Rusers\fsesb\oa\Einbridge, Adams, 3300 Bloor Street West, 14th Floor, Centre Tower, Toronto, Ontario M8X 2X4

Telephone: 416-734-3500 Fax: 416-231-1626 Toll Free: 1-877-682-8772

Filed: 2008-03-26 EB-2007-0889 Exhibit B Tab 3 Schedule 3 Page 1 of 4

Gas Storage Operations 3595 Tecumseh Road MOORETOWN ON NON 1M0

Terry Chupa C.I.M.
Land Agent/Land Contracts Manager
Tel 519 862-6008
Fax 519 862-1168
Email terry.chupa@enbridge.com



March 13, 2008

File Number: L50E-22908-020

Ross Bradshaw 2021 McCallum Line Wilkesport, ON NOP 2R0

Re: construction of pipeline

Thank you for your letter of February 22, 2008 in which you said you would prefer that we construct the pipeline in the winter, if at all possible, because it would cause less negative impact on your land if the ground was froze.

We may include your letter, along with other materials, in a submission to the Ontario Energy Board seeking approval to construct the pipeline as soon as is practical for the Board.

Yours truly,

Terry Chupa C.I.M.

Land Agent/Land Contracts Manager

Filed: 2008-03-26 EB-2007-0889 Exhibit B Tab 3 Schedule 3 Page 2 of 4

February 22, 2008

Terry Chupa Enbridge 3595 Tecumseh Road Mooretown, ON NON 1M0

Re: construction of pipeline

Further to your letter of January 16, 2008 and our conversations about the pipeline construction, I would prefer that you construct the pipeline in the winter if at all possible.

Since you removed the snow from the proposed route the frost has been able to work its way deeper into the ground. The current winter conditions are ideal for the proposed construction as it would reduce the negative impact to my land.

I would support any efforts you pursue to advance the timing of pipeline construction so that you may be able to take advantage of the remaining cold weather time periods. Otherwise, as we have talked about, the pipeline installation may be done in less than ideal conditions causing a greater negative impact on my land.

Yours truly,

Ross Bradshaw

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* Dollar Amounts have been removed for confidentiality purposes

Filed: 2008-03-26 EB-2007-0889 Exhibit B Tab 3 Schedule 3 Page 3 of 4

Gas Sturage Operations 3595 Techniseh Road MOORETOWN ON NON TIMO Terry Chupa C.I.M.
Land Agent/Land Contracts Manager
Tel 519 862-6008
Fax 519 862-1158
Email terry.chupa@enbridge.com

January 16, 2008

File Number: L5CE-22908-020

Ross Bradshaw 2021 McCallum Line Wilkesport, ON NOP 2R0

Re: NPS 16 Vector Tie-In Pipeline Project

REVISED - Compensation for Easement and Temporary Working Area

Agreements

Further to rny letter to you dated May 2, 2007, I would like to update you on a few changes that have occurred since that time.

- 1. To be consistent with other easement negotiations that were completed subsequent to our agreement with you, we have increased your compensation rate as follows:
 - · for the permanent easement, from
 - and for the Temporary Working Area Agreement (TWA),
- In addition, along with this letter is a revised offer for the TWA agreement that shows the higher compensation rate as well as our request to increase the width of the TWA from 10 metres to 15 metres.

As a result of the increase in rates the estimated amount for the permanent easement has increased from of the TWA (at the 15 metre width) has increased from giving a total increase of as shown on the attached revised compensation offer.

Enclosed please find our cheque in the amount of , which will bring the payments to you that resulted from the changes to the compensation rates and allocations to the appropriate level as set out below:

Consideration for signing Agreement to Grant Easement Signing bonus for signing Agreement to Grant Easement Sub-total Less: consideration already paid on May 5, 2007 Balance outstanding due to increased compensation rates

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3. Earlier we had talked about installing the pipeline in the fall of 2007. We have not

2008-01-16 Page 2

yet received approval from the Ontario Energy Board to construct this pipeline, but we expect to receive this approval in the next month or so and we propose to commence installation of the pipeline as soon as possible after that. The balance of the compensation that is payable upon commencement of construction will be made to you at that time.

This time period may mean that the pipeline is installed in less than ideal conditions. In an attempt to reduce the negative impact on your land, we would like to strip the top soil as soon as surface conditions permit. Once stripped, work on the sub-soil may occur with less chance of long term negative impacts to your land.

Throughout this process, please feel free to talk with Jeff Fairchild or myself about any concerns that you may have.

Yours truly.	
Terry Chupa C.I.M. Land Agent/Land Contracts Manager	
Agreed to and accepted this $\frac{17^{1/2}}{2}$ day of $\frac{\sqrt{2}}{2}$, 2008
Last add were	
Ross Bradshaw	