2000 – 10423 101 St NW,
Edmonton, Alberta
T5H 0E8 Canada
epcor.com

May 10, 2019

Sent By Electronic Mail, RESS Electronic Filing and Courier

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
27-2300 Yonge Street
Toronto, ON M4P 1E4

Dear Ms. Walli:

Re: EPCOR Natural Gas Limited Partnership ("ENGLP") Southern Bruce Project EB-2018-0263 Leave to Construct Application

Enclosed are revised responses to Ontario Energy Board ("**OEB**") Staff Interrogatories 4(d) and (e) and 18 (a) regarding the above referenced file. Updates to 4(d) and (e) include updated information regarding impacted landowners. The update to 18(a) includes a draft of the Environmental Projection Plan.

Confidential copies and non confidential copies of all the OEB Staff Interrogatories have been filed with the Board.

Please do not hesitate to contact me if you have any questions.

Sincerely,

[Original signed by]

Bruce Brandell
Director, Commercial Services
EPCOR Utilities Inc.
bbrandell@epcor.com
(780) 412-3720

Interrogatory 1:

Reference: Exhibit A, Tab 2, Schedule 1, page 2
Exhibit A, Tab 5, Schedule 1, page 3

Preamble: *"Based on its Common Infrastructure Plan (CIP) as filed in a competitive process in the South Bruce Expansion Applications, EPCOR Natural Gas Limited Partnership (EPCOR) was selected as the successful proponent to file for leave to construct (LTC) gas facilities in the Southern Bruce Municipalities*[1].

EPCOR has applied to the OEB for an Order granting LTC approximately 75 km of NPS 6 and 8-inch steel pipeline, 45 km of NPS 6-inch polyethylene pipeline and 178 km of NPS 2 and 4-inch polyethylene pipeline as well as six pressure regulating stations (Project) in the Municipality of Arran-Elderslie, the Municipality of Kincardine and the Township of Huron-Kinloss (Southern Bruce Municipalities). The 178 km of NPS 2 and 4-inch polyethylene pipeline is for distribution within the Southern Bruce Municipalities."

Questions:

(a) Please provide a chart that compares the CIP parameters as determined through the Staff Progress Report[2] and the Decision on Preliminary Issues and Procedural Order No. 8[3] from the competitive process, with those same parameters that now underpin this application. For example, compare the number of communities to be served as determined through the CIP parameters with the number of communities to be served in this application, the construction schedule filed in the CIP with the construction schedule included in this application, etc. Please explain any differences and provide a reference for where in the application the relevant parameter can be found.

(b) Please confirm that EPCOR is seeking leave to construct the 178 km of NPS 2 and 4-inch polyethylene pipeline for distribution within the Southern Bruce Municipalities.

[1] EB-2016-0137/0138/0139
[2] Filed on July 20, 2017 in EB-2016-0137/0138/0139
[3] EB-2016-0137/0138/0139

Responses:

(a) Table OEB 1-1 compares the CIP parameters as determined through the Staff Progress Report and the Decision on Preliminary Issues and Procedural Order No. 8 from the competitive process, with those same parameters that now underpin this application. In order to be helpful, EPCOR Natural Gas Limited Partnership (referred to as "ENGLP" in the application and these responses) has also included in the chart a detailed list of CIP parameters that were addressed in the Staff Progress Report and the Decision on Preliminary Issues and Procedural Order No. 8 but are outside the scope of this Application and are properly dealt with in ENGLP's Rate Application (EB-2018-0264). In those cases a reference to that application has been provided for informational purposes only.

Table OEB 1- 1: CIP Parameters

	Col. 1	Col. 2	Col. 3
	Parameter	**Description**	**Reference in Application**
1	**CRITERIA EPCOR HELD TO**		
2	Cumulative 10-Year Revenue Requirement per Unit of Volume	$0.2209/m^3	EB-2018-0264[4]
3	Customer Years	42,569 Customer Years	EB-2018-0264
4	Cumulative 10-Year Throughput Volume	342,186,741 m^3	EB-2018-0264
5			
6	**PARAMETERS That Form Basis of CIP Economics**		
7	Communities To Be Served	Chesley, Inverhuron, Paisley, Tiverton, Kincardine, Lucknow, Lurgan Beach, Point Clark, Ripley, Bruce Energy Centre Industrial Park	Parameter met. See Exhibit A, Tab 3, Schedule 2 for map of system
8	Construction Schedule	Gas mains to communities served to be constructed within two years from commencement of construction	Gas main parameter has been impacted by approximately 11 months due to change in common assumption regarding OEB timelines impacting construction schedule. See Exhibit A, Tab 6, Schedule 2 for schedule as of February 2019. For most current schedule please see below.

[4] EB-2018-0264 is ENGLP's Rate Application for the Southern Bruce utility. Items in the chart that reference the rate application are addressed in the rate application and generally not in this leave to construct.

	Col. 1	Col. 2	Col. 3
	Parameter	**Description**	**Reference in Application**
9	10-Year Forecast Horizon	10-year rate stability period	Parameter met. EB-2018-0264 Exhibit 1.2.1 / 10.1
10	Capital Costs	Any capital cost overruns incurred during first 10-years would not be permitted in rate base for year 11 and beyond	Parameter met. EB-2018-0264 Exhibit 1.2.1 / 2.8
11	Revenue Requirement	Gross revenue requirement over the rate stability period associated with the distribution system as detailed in EPCOR's CIP	Parameter met. EB-2018-0264 Exhibit 1.2.1, 3, Exhibit 3, Exhibit 6
12	OM&A Costing Methodology	Base OM&A cost estimates on fully allocated costs	Parameter met. EB-2018-0264 Exhibit 1.2.1, Exhibit 4.3
13	Service Levels	Plan for operations and maintenance that would meet service levels identified in the Gas Distribution Access Rules	Parameter met. EB-2018-0264 Exhibit 1.2.1
14	Other CIP Parameters	Royalty payments to municipalities excluded if not recovered through revenue requirement	Parameter met. EB-2018-0264 No royalty paid to municipalities
15	Capital Structure	Use Union's approved deemed debt/equity ratio	Parameter met. EB-2018-0264 Exhibit 1.2.1, Exhibit 5
16			
17	**COMMON ASSUMPTIONS To Allow Board to Compare CIPs**		
18	Customer Consumption	Common consumption levels for each mass market segment, except for large commercial or industrial	Parameter met. EB-2018-0264 Exhibit 1.2.1, Exhibit 3.2
19	Construction Schedule	Timelines for OEB decisions	Parameter impacted due to delay in timelines. See revised schedule below and OEB Interrogatory 11a).
20	Government Grants / Municipal Contributions and Aid to Construction	Excluded from CIP	Parameter met. EB-2018-0264 Exhibit 3.2.3
21	Demand Side Management	Excluded from CIP	Parameter met. EB-2018-0264 Exhibit 3.2.3, Exhibit 4.6
22	Cap and Trade Costs	Excluded from CIP	Parameter met. EB-2018-0264 Exhibit 3.2.3
23	Gas Commodity Costs	Excluded from CIP	Parameter met EB-2018-0261 Exhibit 1.2.1
24	Depreciation Rates	Use depreciation rates based on Union's OEB approved rates	Parameter met. EB-2018-0264 Exhibit 4.4
25	Taxes	Use common tax rates. Exclude tax holidays from municipalities	Parameter met. EB-2018-0264 Exhibit 4.5
26	Interest During Construction	Use OEB prescribed rate	Parameter met. EB-2018-0264 Exhibit

	Col. 1	Col. 2	Col. 3
	Parameter	**Description**	**Reference in Application**
			1.2.1
27	Upstream Reinforcement	Excluded from CIP	Parameter met. EB-2018-0264 Exhibit 2.8.1
28	Inflation Costs	Use same inflation rate	Parameter met. EB-2018-0264 Exhibit 1.2.1

Construction Schedule - Revised April 2019

Task	Duration (days)	2018				2019												2020												2021											
		SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Leave to Construct Application																																							
Construction Mobilization																																							
Detail Design																																							
2019 - Commencement of Construction – Dornoch to Bruce Industrial Park																																							
NPS 8 steel Dornoch to Bruce Energy Center	131																																						
Dornoch Check Meter Station	40																																						
Bruce Energy Centre Sales Meter Station	10																																						
GFSA Sales Meter Station	10																																						
Connection to Union Gas System																																							
2020 - Commencement of Construction – Bruce Industrial Park to Kincardine																																							
NPS 6 steel from Bruce Energy Center to Kincardine	132																																						
NPS 2 plastic distribution in Tiverton	50																																						
Tiverton Pressure Regulating Station	15																																						
NPS 6 Bypass to NPS 2 plastic distribution in Kincardine	120																																						
Kincardine Pressure Regulating Stations	15																																						
NPS 6 plastic heading south along shore	70																																						
NPS 4 & 2 plastic distribution in Inverhuron	70																																						
Installation of customer connections																																							
2021 - Construction – Kincardine to Lucknow																																							
NPS 6 plastic from Kincardine to Lucknow	135																																						
NPS 2 plastic distribution in Ripley	48																																						
NPS 4 plastic to Ripley	30																																						
NPS 4 & 2 plastic distribution in Lucknow	65																																						
NPS 4 & 2 plastic distribution in Paisley	88																																						
NPS 2 plastic distribution in Point Clark	95																																						
NPS 4 plastic from Lurgan Beach to Point Clark	45																																						
NPS 2 plastic distribution in Chesley	111																																						
NPS 2 plastic distribution in Lurgan Beach	80																																						
Paisley Pressure Regulating Station	10																																						
Chesley Pressure Regulating Station	10																																						
Installation of customer connections																																							
Completion of all Construction																																							

(b) ENGLP is seeking approval for the 75 km of high pressure pipe and 45 km of MDPE pipe forming the backbone of the system. ENGLP is not seeking approval of the referenced 178 km as it is distribution piping that may be constructed pursuant to ENGLP's Certificates of Public Convenience and Necessity, for which leave to construct is not required. ENGLP described the 178 km within its application in order to provide a fulsome description of the overall activities/infrastructure.

Interrogatory 2:

Reference: Exhibit A, Tab 2, Schedule 1, page 4

Preamble: *"EPCOR will enter into franchise agreements with the County of Bruce, the County of Grey, the Municipality of Arran-Elderslie, the Municipality of Brockton, the Municipality of Kincardine, the Municipality of West Grey, the Township of Chatsworth and the Township of Huron-Kinloss. All proposed franchise agreements are based on the Board's Model Franchise Agreement."*

Question:
Has (or will) EPCOR entered into any other agreements with the Southern Bruce Municipalities? If so, please describe the nature of the agreements

Responses:

(a) ENGLP has no other agreements and has no plans to enter into any other agreements with the Southern Bruce Municipalities.

Interrogatory 3:

Reference: Exhibit A, Tab 3, Schedule 1, Page 6
Exhibit A, Tab 3, Schedule 2, Page 1
EB-2016-0137|-0138|-0139 EPCOR CIP Application, Schedule B, Pages 2 to 9

Preamble: "*Following the comparative evaluation, outlined in the Environmental Report, the preliminary preferred route was confirmed as the Preferred Route as shown in Tab 3, Schedule 2.*"

Questions:

(a) Please confirm that the Preferred Route as shown in Tab 3, Schedule 2 is identical to that proposed in the CIP. If it is not, please identify and explain the reasons for any differences.

(b) Please confirm that EPCOR's distribution pipeline routes remain identical to the routes proposed in the CIP

Responses:

(a) ENGLP confirms that the Preferred Route as shown in Tab 3, Schedule 2 is identical to that proposed in the CIP.

(b) ENGLP confirms that the distribution pipeline routes remain identical to the routes proposed in the CIP.

Interrogatory 4:

Reference: Exhibit A, Tab 3, Schedule 1, pages 6 and 7
Exhibit A, Tab 10, Schedule 3, pages 1-5

Preamble: *"EPCOR provided a list of entities with whom land easements and necessary agreements will be coordinated and negotiated. However, the list does not identify with which entities land easements may be required.*

EPCOR identified 17 properties that could be directly affected by construction of the pipeline and associated facilities."

Questions:

(c) In tabular form, please identify with which of the entities listed in Exhibit A, Tab 3, Schedule 1 land easements may be required, the nature of the easement (permanent or temporary), and the status of negotiations.

(d) Has the number of potentially affected properties changed from 17 since EPCOR filed the Application? If so, please provide an updated list of properties in redacted (for the record) and non-redacted forms. For each property, please identify whether the land is to be purchased, or a temporary or permanent easement is required.

(e) Please provide an update on the status of land use negotiations with potentially affected property owners.

(f) Please provide a table that lists all permits and approvals that are required to complete the construction of the project, including a description of the purpose or need for each permit and the status of each permit/approval application. Please also provide dates for when EPCOR expects to receive any outstanding permits/approvals required, and what impact any delays in receiving these might have on the schedule.

Responses:

(c) Table OEB-4-1 below provides an update to the entities listed in Exhibit A, Tab 3, Schedule 1 that includes the land easements required and the nature of the easement as well as the status of negotiations.

(d) The number of potentially affected properties has changed from 17 to 39 since ENGLP filed the Application as detailed design of the mainline alignment was finalized. Of the 22 additional properties identified 21 are for temporary space. The landowner of the 22nd property had previously been notified and contacted as they own LT10 as listed in Table OEB-4-2. Please note that 9 properties are identified as alternatives if the preferred option cannot be secured. Table OEB-4-2 includes the additional properties that have been identified with all the information requested. Table OEB-4-2 has been updated as 10 properties that were already listed in Table OEB-4-1 were inadvertently included.

Each of the additional affected property owners have been contacted in person. ENGLP has provided the following to these landowners:

- A Project Letter that contains an overall project summary. This letter states that ENGLP has applied for a Leave to Construct with the OEB (see Attachment OEB-4-1) and is currently involved in the OEB hearing;
- An explanation of the Leave to Construct regulatory process; and
- Alignment and layout drawings that show how each landowner will be affected along with a work space agreement.

Additionally, ENGLP is providing each of these affected landowners with a copy of the OEB Notice and, where possible, an update of the Leave to Construct process by no later than May 13, 2019.

(e) Please refer to Table OEB-4-3 as it contains a summary of the status of negotiations. There has not been any negative feedback or comments from any landowners that ENGLP has spoken to. Only two landowner to date are not interested in providing temporary pipe storage for the Project. ENGLP has already secured an alternative temporary pipe storage area. Table OEB-4-3 has been updated with the status of negotiations as of May 10, 2019.

(f) Please refer to Table OEB-4-4 below.

Table OEB 4- 1

Section	ID	PIN	Registered Owner(s)	Address for Service (Owners)	Encumbrancers	Address for Service (Encumbrancers)	Land Easement Required?	Status of negotiations
~~1.2~~	-	-	-	-		-	~~land not required~~	
1.3	C	33186 -0436	[redacted]	[redacted]		n/a	Purchase- fee simple	Not contact yet
	C1	33187 -0013	[redacted]	[redacted]	[redacted]	[redacted]	Purchase- fee simple: Alternative if C cannot be acquired.	Not contact yet
	C2	33187 -0010	[redacted]	[redacted]	Mtg in favour of: Farm Credit Canada	[redacted]	Purchase- fee simple: Alternative if C cannot be acquired.	Not yet contacted
1.4	-	33182 -0127	The Trustees of the Vesta Congregation of the Methodist Church	The Presbyterian Church in Canada 50 Wynford Drive Toronto, ON M3C 1J7 Canada - The United Church of Canada		n/a	Purchase- Fee Simple	Not yet contacted

Section	ID	PIN	Registered Owner(s)	Address for Service (Owners)	Encumbrancers	Address for Service (Encumbrancers)	Land Easement Required?	Status of negotiations
				3250 Bloor Street West, Suite 200 Toronto ON M8X 2Y4				
1.5	P	33181-0760	[redacted]	[redacted]		n/a	Purchase-Fee Simple	Not yet contacted
	P1	33189-0094	[redacted]	[redacted]		n/a	Purchase-fee simple: Alternative if P cannot be acquired.	Not yet contacted
	P2	33189-0017	Calalan Farms Ltd.	1050 Greenock-Brant, Cargill ON N0G 1J0		n/a	Purchase-fee simple: Alternative if C cannot be acquired.	Not yet contacted

Section	ID	PIN	Registered Owner(s)	Address for Service (Owners)	Encumbrancers	Address for Service (Encumbrancers)	Land Easement Required?	Status of negotiations
~~1.6~~	~~-~~	~~33290-0035~~	[redacted]	[redacted]		~~n/a~~	~~Not required~~	
1.7	T1	33293-0003	1210987 Ontario Inc.	44221 Bridge Road, R.R.#5 Seaforth ON N0K 1W0	Mtg in favour of: The Toronto-Dominion Bank	56 Main Street South, P.O. Box 520, Seaforth ON N0K 1W0	Purchase-Fee Simple	Not yet contacted
	T2	33287-0130	[redacted]	[redacted]			Purchase-fee simple: Alternative if T1 cannot be acquired.	Not yet contacted
1.8	-	33286-0162	BEC Business & Innovation Centre Inc.	1-2351 Huron Street, DANCOR Campus, London ON N5V 0A8	Mtg in favour of: Huron Bio-Energy Inc.	1-2351 Huron Street, DANCOR Campus, London ON N5V 0A8	Purchase-Fee Simple	Not yet contacted
1.9	I	33293-0134	The Corporation of the Township of Kincardine	Municipality of Kincardine 1475 Concession 5, Kincardine ON N2Z 2X6		n/a	Purchase-Fee Simple	Not yet contacted
	alt	33293	The Corporation	Municipality of		n/a	Purchase-fee simple:	Not yet

Section	ID	PIN	Registered Owner(s)	Address for Service (Owners)	Encumbrancers	Address for Service (Encumbrancers)	Land Easement Required?	Status of negotiations
	1	-0193	of the Municipality of Kincardine	Kincardine 1475 Concession 5, Kincardine ON N2Z 2X6			Alternative if I cannot be acquired.	contacted
	alt 2	33293 -0182	The Corporation of the Township of Kincardine	Municipality of Kincardine 1475 Concession 5, Kincardine ON N2Z 2X6		n/a	Purchase- fee simple: Alternative if I cannot be acquired.	Not yet contacted
	alt 3	33293 -0026	[redacted]	[redacted]		n/a	Purchase- fee simple: Alternative if I cannot be acquired.	Not yet contacted
1.10	K 1	33303 -0194	West Ridge on the Lake Inc.	100 Hunter Valley Road, Orillia ON L3V 6H2	Easement: KN15145 in favour of The Hydro-Electric Power Commission of Ontario (now known as Hydro One)	Hydro One Networks Inc. 483 Bay Street, South Tower, 8th Floor Reception, Toronto ON M5G 2P5	Purchase- fee simple	Not yet contacted

Section	ID	PIN	Registered Owner(s)	Address for Service (Owners)	Encumbrancers	Address for Service (Encumbrancers)	Land Easement Required?	Status of negotiations
	K 2 & K 3	33303 -0866	Ontario Peninsula Farms Ltd.	c/o Nott Farms (Ont.) Ltd., R.R.#4, Clinton ON N0M 1L0		N/a - See notes	Purchase- fee simple: Alternative if K1 cannot be acquired.	Not yet contacted

Table OEB 4- 2

TRACT ID	INFRASTRUCTURE TYPE	PHASE	STATION NAME	SITE ID	SITE TYPE	PIN	LANDOWNER	LANDOWNER CONTACT	CIVIC ADDRESS	OWNERS ADDRESS	AGREEMENT TYPE	AGREEMENT STATUS
10	PIPE STORAGE AREA	1	N/A	PSA2	PREFERRED	33290-0030	[redacted]	[redacted] Fax:	[redacted]	N/A	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
12	TEMPORARY LAND USE AREA	1	N/A	TL2	PREFERRED	37188-0163	[redacted]	[redacted] E-mail: Fax:	N/A	[redacted]	TEMPORARY-WORK SPACE AREA	~~NEGOTIATION IN PROGRESS~~ AGREEMENT REACHED
13	TEMPORARY LAND USE AREA	1	N/A	TL3	PREFERRED	37188-0120	[redacted]	[redacted] E-mail: Fax:	N/A	[redacted]	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
16	TEMPORARY LAND USE AREA	1	N/A	TL6	PREFERRED	33187-0013	[redacted]	Phone: E-mail: Fax:	[redacted]	[redacted]	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
17	TEMPORARY LAND USE AREA	1	N/A	TL7	PREFERRED	33182-0132	[redacted]	Phone: E-mail: Fax:	[redacted]	N/A	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
18	TEMPORARY LAND USE AREA	1	N/A	TL8	PREFERRED	33188-0004	[redacted]	Phone: E-mail: Fax:	[redacted]	N/A	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
20	TEMPORARY LAND USE AREA	1	N/A	TL10	PREFERRED	33290-0013	[redacted]	[redacted] E-mail: Fax:	N/A	[redacted]	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
21	TEMPORARY LAND USE AREA	1	N/A	TL11	PREFERRED	33238-0020	[redacted]	[redacted] E-mail: Fax:	[redacted]	N/A	TEMPORARY-WORK SPACE AREA	~~NOT YET CONTACTED~~ AGREEMENT REACHED
22	TEMPORARY LAND USE AREA	1	N/A	TL12	PREFERRED	33290-0018	[redacted]	[redacted] E-mail: Fax:	[redacted]	N/A	TEMPORARY-WORK SPACE AREA	~~NEGOTIATION IN PROGRESS~~ AGREEMENT REACHED
23	TEMPORARY LAND USE AREA	1	N/A	TL13	PREFERRED	33290-0030	SNAKE CREEK FARMS LTD.;	[redacted]	[redacted]	N/A	TEMPORARY-WORK SPACE	AGREEMENT REACHED

TRACT ID	INFRASTRUCTURE TYPE	PHASE	STATION NAME	SITE ID	SITE TYPE	PIN	LANDOWNER	LANDOWNER CONTACT	CIVIC ADDRESS	OWNERS ADDRESS	AGREEMENT TYPE	AGREEMENT STATUS
								E-mail: [redacted] Fax:	[redacted]		AREA	
25	TEMPORARY LAND USE AREA	1	N/A	TL15	PREFERRED	33289-0036	[redacted]	[redacted] Fax:	N/A	[redacted]	TEMPORARY-WORK SPACE AREA	~~NEGOTIATION IN PROGRESS~~ AGREEMENT REACHED
27	TEMPORARY LAND USE AREA	1	N/A	TL17	PREFERRED	33283-0072	[redacted]	[redacted] Fax:	N/A	[redacted]	TEMPORARY-WORK SPACE AREA	AGREEMENT REACHED
8	VALVE SITE	1	N/A	VS2	PREFERRED	33290-0013	[redacted]	Phone: E-mail: Fax:	N/A	N/A	PURCHASE - FEE SIMPLE	~~NOT YET CONTACTED~~ NEGOTIATIONS IN PROGRESS
9.1	PIPE STORAGE AREA	1	N/A	PSA1-ALT	ALTERNATIVE	37196-0129	WAYNE SCHWARTZ CONSTRUCTION LIMITED	Phone: E-mail: Fax:	581443 GREY ROAD 25 CHESLEY ON, N0G 1L0		TEMPORARY-WORK SPACE AREA	NEGOTIATIONS IN PROGRESS
15	TEMPORARY LAND USE AREA	1	N/A	TL5	PREFERRED	33186-0436	[redacted]	Phone: [redacted] E-mail: Fax:	[redacted]	[redacted]	TEMPORARY-WORK SPACE AREA	NEGOTIATIONS IN PROGRESS
19	TEMPORARY LAND USE AREA	1	N/A	TL9	PREFERRED	33181-0767	THE CORPORATION OF THE COUNTY OF BRUCE;	Phone: E-mail: Fax:	N/A	N/A	TEMPORARY-WORK SPACE AREA	NEGOTIATIONS IN PROGRESS
28	TEMPORARY LAND USE AREA	1	N/A	TL18	PREFERRED	33287-0111	[redacted]	[redacted] E-mail: Fax:	[redacted]	N/A	TEMPORARY-WORK SPACE AREA	NEGOTIATIONS IN PROGRESS
11	TEMPORARY LAND USE AREA	1	N/A	TL1	PREFERRED	37187-0052	PUBLIC AUTHORITY HAVING JURISDICTION;	Phone: E-mail: Fax:	N/A	N/A	TEMPORARY-WORK SPACE AREA	NO AGREEMENT REQUIRED
14	TEMPORARY LAND USE AREA	1	N/A	TL4	PREFERRED	37216-0051	PUBLIC AUTHORITY HAVING JURISDICTION;	Phone: E-mail: Fax:	N/A	N/A	TEMPORARY-WORK SPACE AREA	NO AGREEMENT REQUIRED
26	TEMPORARY LAND USE AREA	1	N/A	TL16	PREFERRED	33283-0087	PUBLIC AUTHORITY HAVING JURISDICTION;	Phone: E-mail: Fax:	N/A	N/A	TEMPORARY-WORK SPACE AREA	NO AGREEMENT REQUIRED
9	PIPE STORAGE AREA	1	N/A	PSA1	PREFERRED	33183-0177	TURUSS (CANADA) INDUSTRY CO., LTD.;	Name: [redacted] Manager Phone: [redacted] E-mail: Fax:	60 QUEEN STREET NORTH CHESLEY ON, N0G 1L0	60 QUEEN STREET NORTH CHESLEY ON, N0G 1L0	TEMPORARY-WORK SPACE AREA	~~NEGOTIATIONS IN PROGRESS~~ LANDOWNER NOT INTERESTED
24	TEMPORARY	1	N/A	TL14	PREFERRED	33289-	[redacted]	[redacted]	[redacted]	N/A	TEMPORARY-	~~NEGOTIATIONS IN PROGRESS~~

TRACT ID	INFRASTRUCTURE TYPE	PHASE	STATION NAME	SITE ID	SITE TYPE	PIN	LANDOWNER	LANDOWNER CONTACT	CIVIC ADDRESS	OWNERS ADDRESS	AGREEMENT TYPE	AGREEMENT STATUS
	LAND USE AREA					0087	[redacted]	[redacted] E-mail: Fax:	[redacted]		WORK SPACE AREA	LANDOWNER NOT INTERESTED
~~29~~	~~STATION~~	~~2~~	~~TIVERTON~~	~~T1~~	~~PREFERRED~~	~~33293-0003~~	~~1210987 ONTARIO INC.~~	~~Phone: E-mail: Fax:~~	~~N/A~~	~~44221 BRIDGE ROAD RR5 SEAFORTH ON, N0K 1W0~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~30~~	~~STATION~~	~~2~~	~~TIVERTON~~	~~T2~~	~~ALTERNATIVE~~	~~33287-0130~~	[redacted]	~~Phone: E-mail: Fax:~~	~~N/A~~	[redacted]	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~31~~	~~VALVE SITE~~	~~2~~	~~N/A~~	~~VS3~~	~~PREFERRED~~	~~33286-0162~~	~~BEC BUSINESS & INNOVATION CENTRE INC.;~~	~~Phone: E-mail: Fax:~~	~~N/A~~	~~1 2351 HURON STREET DANCOR CAMPUS LONDON ON, N5V 0A8~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~32~~	~~STATION~~	~~2~~	~~INVERHURON~~	~~I~~	~~PREFERRED~~	~~33293-0134~~	~~THE CORPORATION OF THE TOWNSHIP OF KINCARDINE;~~	~~Phone: E-mail: Fax:~~	~~N/A~~	~~MUNICIPALITY OF KINCARDINE 1475 CONCESSION 5 KINCARDINE ON N2Z 2X6~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~33~~	~~STATION~~	~~2~~	~~INVERHURON~~	~~I1~~	~~ALTERNATIVE~~	~~33293-0193~~	~~THE CORPORATION OF THE MUNICIPALITY OF KINCARDINE;~~	~~Phone: E-mail: Fax:~~	~~653 BRUCE ROAD 23 KINCARDINE ON N2Z 2X6~~	~~MUNICIPALITY OF KINCARDINE 1475 CONCESSION 5 KINCARDINE ON N2Z 2X6~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~34~~	~~STATION~~	~~2~~	~~INVERHURON~~	~~I2~~	~~ALTERNATIVE~~	~~33293-0182~~	~~THE CORPORATION OF THE TOWNSHIP OF KINCARDINE;~~	~~Phone: E-mail: Fax:~~	~~177 BRUCE ROAD 23 KINCARDINE ON N2Z 2X6~~	~~MUNICIPALITY OF KINCARDINE 1475 CONCESSION 5 KINCARDINE ON N2Z 2X6~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~35~~	~~STATION~~	~~2~~	~~INVERHURON~~	~~I3~~	~~ALTERNATIVE~~	~~33293-0026~~	[redacted]	~~Phone: E-mail: Fax:~~	~~N/A~~	~~N/A~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~36~~	~~STATION~~	~~2~~	~~KINCARDINE~~	~~K1~~	~~ALTERNATIVE~~	~~33303-0194~~	~~WEST RIDGE ON THE LAKE INC.~~	~~Phone: E-mail: Fax:~~	~~N/A~~	~~100 HUNTER VALLEY ROAD ORILLIA ON, L3V 6H2~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~37~~	~~STATION~~	~~2~~	~~KINCARDINE~~	~~K2~~	~~ALTERNATIVE~~	~~33303-0866~~	~~ONTARIO PENINSULA FARMS LTD.~~	~~Phone: E-mail: Fax:~~	~~N/A~~	~~C/O NOTT FARMS (ONT.) LTD. RR4 CLINTON ON, N0M 1L0~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~
~~38~~	~~STATION~~	~~2~~	~~KINCARDINE~~	~~K3~~	~~PREFERRED~~	~~33303-0866~~	~~ONTARIO PENINSULA FARMS LTD.~~	~~Phone: E-mail: Fax:~~	~~N/A~~	~~C/O NOTT FARMS (ONT.) LTD. RR4 CLINTON ON, N0M 1L0~~	~~PURCHASE - FEE SIMPLE~~	~~NOT YET CONTACTED~~

Rows 29-38 were inadvertently included in Table OEB-4-2. These landowners have been previously notified and are included in Table OEB-4-1.

Table OEB 4- 3

INFRASTRUCTURE TYPE	AGREEMENT REACHED	NEGOTIATIONS IN PROGRESS	NOT YET CONTACTED	LANDOWNER NOT INTERESTED	NO AGREEMENT REQUIRED
STATIONS	0	0	5	0	10
VALVE SITE	0	0	2~~3~~	0	0
PIPE STORAGE AREA	1	1~~0~~	0	1	0
TEMPORARY LAND USE AREA	11~~6~~	3~~7~~	0~~2~~	1~~0~~	3
TOTAL	12	4	7~~8~~	2	13

Table OEB 4-4: Permits and Approvals

Permit Name	Jurisdiction	Administering Agency	Description	Status	Expected date	Impact if delayed
Authorization under the Fishers Act,1985	Federal	Fisheries and Oceans Canada (DFO)	Following determination of final crossing methods, a fish habitat impact screening (self-assessment) should be completed to determine if DFO review/authorization will be required. The proposed methods for pipeline water crossings will likely not require authorization provided measures to avoid causing serious harm to fish and fish habitat are followed during construction. These measures include designing the drill path to an appropriate depth, completing the work during the appropriate timing window, installation of appropriate sediment and erosion control measures (i.e., silt fencing around disturbed areas, development of a contingency plan, etc.). If these measures are followed, a project of this nature is considered low risk to fish and fish habitat and can proceed without DFO review.	The DFO self screening is underway for all crossings along the Dornoch to BEC section.	31-May-19	Construction of the mainline can start in sections that do not require water course crossings.
Permits under Ontario Regulations 169/06 and 164/06 (Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), as per the Conservation Authorities Act, 1990	Provincial	Saugeen Valley Conservation Authority (SVCA) and Maitland Valley Conservation Authority (MVCA)	Required for works within SVCA and MVCA Regulated Areas including shorelines, watercourses, wetlands and hazardous lands (flooding and erosion hazards, and unstable soils and bedrock).	Preliminary Package submitted to SVCA. Pacakage to MVCA will be submitted in the Fall of 2019 as this is not required for the 2019 construction season	6/15/2019 (Tentative subject to SVCA review times)	No impact on schedule. Construction activities can happen outside the interest areas of the conservation authorities. Contractor will adjust execution strategy.
Register water taking activities on the Environmental Activity and Sector Registry as per the Environmental Protection Act and the Ontario Water Resources Act, 1990	Provincial	Ministry of the Environment and Climate Change (MOECC)	If dewatering activities of more than 50,000 litres (L) per day but less than 400,000 L per day are required. Any dewatering over 400,000 L/day will require a Permit to Take Water from the MOECC under the Ontario Water Resources Act.	MECP has indicated that a PTTW is required. Preparation of the PTTW technical report is underway.	6/30/2019 (Tentative subject to MECP review times).	Construction of the mainline can start in sections that do not require extensive dewatering. Will only impact the construction sequence

Permit Name	Jurisdiction	Administering Agency	Description	Status	Expected date	Impact if delayed
Species at Risk Overall Benefit Permit under the Endangered Species Act, 2007 (ESA)	Provincial	Ministry of Natural Resources and Forestry (MNRF)	Consultation is required with the MNRF to determine if a permit is required under the ESA permitting process. This permitting would be required for any protected species under the ESA. As indicated in Section 9 (1)(a) of the ESA, "No person shall, kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species". For watercourses supporting aquatic Species at Risk (SAR), the proposed trenchless crossing methods may require either the submission of a Notice of Activity form or Information. Gathering Form to the MNRF to allow the Project to proceed without a permit under the ESA. This will be confirmed through consultation with the MNRF.	Stantec will prepare a letter for submission to the MECP (who now are the regulators for SAR in Ontario). We will identify those locations where HDD is being substituted for open cut. In addition we will propose mitigation (most likely silt fencing) in locations of potential SAR. This is contigent upon receiving information from AECOM on HDD pit and/or open cut locations within mapped wetland areas.	Letter ready for submission May17	No anticipated impact. HDD can be used in place of open cut.
Archaeological clearance under the Ontario Heritage Act (OHA)	Provincial	Ministry of Tourism, Culture, and Sport (MTCS)	Stage 2 archaeological assessments (AA) of the right-of-way (RoW) will be completed for areas of archaeological potential prior to any ground disturbances and/or site alterations. The completed archaeological assessment reports will be forwarded to the MTCS for review and approval.	Stage 1 has been submitted to MTCS and an expediate review was requested. Stage 2 is schedule for spring 2019	5/29/2019 for Stage 1 report clerance from MTCS Stage 2 work to commence week of May 6 (weather permitting).	Construction start date will be delayed until clerance is received
A Cultural Heritage Assessment Report (CHAR). Review of built heritage and cultural heritage landscapes under the OHA	Provincial	MTCS	A Cultural Heritage Assessment Report is required to determine the effects of the Project on heritage resources and provide recommendations to mitigate the impacts, if any.	Field work completed. Report will be completed by May 31st 2019.	TBD	No anticipated impact.
Encroachment Permit under the Highways Act	Provincial	Ministry of Transportation (MTO)	Required if work will occur within the RoW of Highway 21 at Bruce Road 20 and Concession 4.	Consultation with MTO has started.	Crossing highway 21 in 2 spots.	Construction activities can start in areas where this is not required.
Crossing Approval	Provincial	Hydro One Networks Inc. (HONI)	Required for crossing HONI's electric transmission corridors.	Alingment drawings have been shared with HydroOne and consultation has started	5/31/2019	No impact for start of construction in 2019.
Bruce County Forest Conservation By-Law No, 4071 (Exemption Permit)	Municipal	Bruce County	May be required to remove trees during construction.	TBD depending on AECON clearing requirements assessment.	5/31/2019	Construction activities can start in areas where this is not required.
Tree Removal Permit	Municipal	Township of Huron- Kinloss	May be required to remove trees during construction.	Not required for 2019 construction start	4/30/2020	Not required for 2019 construction start
Road Use Agreement	Municipal	Bruce County	Required to locate pipelines within municipal road allowances.	Obtained approval of alignment drawings. ENGLP only requires final sign-off	5/31/2019	Required for construction start date
Encroachment Permit	Municipal	Grey County	Required to permit access to a County Road. Grey County requires a Franchise Agreement with EPCOR, Consent Drawings showing the proposed route and finally a completed Encroachment Permit before work can be performed.	Obtained approval of alignment drawings. ENGLP only requires final sign-off	5/31/2019	Required for construction start date

THE PROJECT TEAM

EPCOR's project management leadership team

AECON Utilities, one of Ontario's leading utility contractors, as design-construction partner.

Stantec Consulting Ltd. for development of the Environmental Report (ER), which has completed over 200 ER's for natural gas projects in Ontario. Stantec will also support EPCOR in all regulatory and permit applications

LandSolutions is a land and environmental consulting firm that will support EPCOR in accessing and managing land for the project.

CONTACTS

General Project Inquiries
Andres Zumbado
Project Manager
EPCOR
780-868-7076

Land Matter Inquiries
Steve Niddery
Senior Project Manager
LandSolutions
905-851-8880

For more information about the projects and project updates, visit **epcor.com/southernbruce**.

PROVIDING MORE

SOUTHERN BRUCE

Natural Gas Distribution Project

BRINGING NATURAL GAS
TO SOUTHERN BRUCE

BRINGING NATURAL GAS TO SOUTHERN BRUCE

With a population of 25,261, the Southern Bruce region (the municipalities of Arran-Elderslie, Kincardine, and the Township of Huron-Kinloss) is the largest area in southern Ontario that currently does not have access to natural gas. For several years, these municipalities, working together with EPCOR, have assigned the highest priority and effort to bring natural gas service to their Southern Bruce communities.

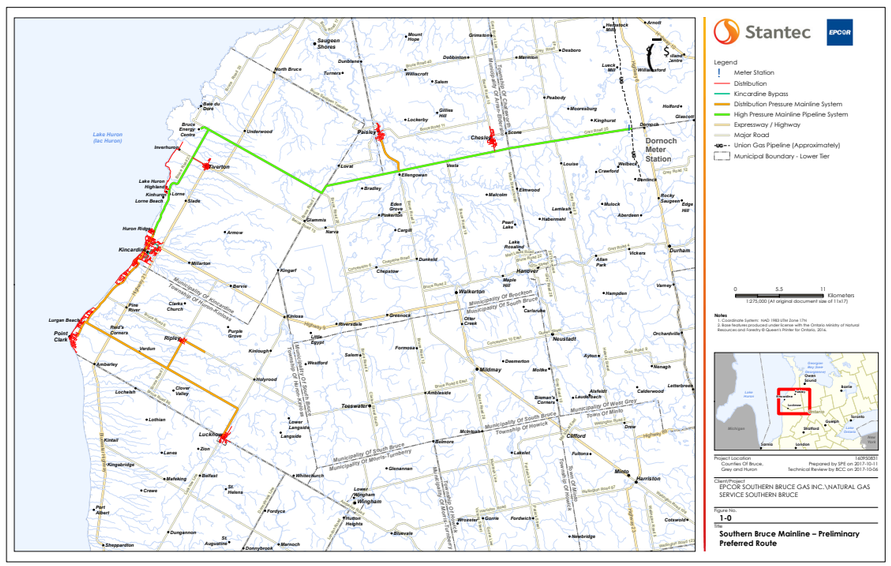
Expansion of natural gas infrastructure to Southern Bruce provides economic benefits to the communities. Consumers directly benefit from the project by accessing lower cost natural gas to fuel their homes and businesses. In the commercial, industrial and agricultural business sectors, a lack of access to natural gas has kept operating costs higher, which in turn has created a competitive disadvantage for doing business in the region and Ontario.

PROJECT OVERVIEW

We will install a natural gas distribution system to serve the communities of Chesley, Paisley, Inverhuron, Tiverton, Kincardine, Lurgan Beach, Point Clark, Ripley, Lucknow and the Bruce Energy Centre. EPCOR's distribution system will consist of two components:

- A larger diameter mainline that will be the backbone of the system and transport gas to each of the communities, and
- A smaller diameter high density polyethylene (HDPE) distribution piping that will be constructed within each of the communities to directly serve homes and businesses.

The map below shows the proposed route of the natural gas distribution system. We believe this route has the lowest overall impact based on stakeholder input, health and safety, social and environmental impacts, use of existing infrastructure space, construction impacts and other constraints.



TIMELINE

The Ontario Energy Board (OEB) regulates the natural gas industry in Ontario in the public interest. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval are required before the project can proceed.

In March 2019, we submitted an updated Leave to Construct application and are now awaiting final approval on this. If the project is approved, we anticipate starting construction in summer 2019 and bringing the system in service in phases, with the full system in service by 2021. The timeline below outlines the proposed schedule for connecting each community.

2015-2017

- 1st Round of Stakeholder and Community Input
- Generic Hearing on Community Expansion Projects
- Grant Application to Infrastructure Ontario
- Common Infrastructure Plan Submission to OEB

2018

- 2nd Round of Stakeholder and Community Input
- Environmental Review
- Supply & Demand
- Project Costs & Rate Development
- Franchise Agreement
- Preferred Route
- Leave to Construct Application for OEB Approval
- Finalize Government Funding
- Large Customer Commitments

2019

Phase I Construction

- 8-inch steel line from Dornoch to Bruce Energy Centre
- Bruce Industrial Park
- Phase I in service

2020

Phase II Construction

- 6-inch steel line from Bruce Energy Centre to Kincardine
- Kincardine & Tiverton Distribution System
- Inverhuron distribution system in Kincardine
- Phase II in service

2021

Phase III Construction

- 6-inch plastic line from Kincardine to Lucknow
- Lucknow, Ripley, Point Clark & Lurgan Beach in Huron-Kinloss
- Full system in service
- Paisley & Chesley distribution system in Arran-Elderslie

CONTINUOUS CONSULTATION

ABOUT EPCOR

With more than 125 years of experience, we're a trusted utility provider to approximately two million people in Canada and the U.S. We build, own and operate electrical, natural gas and water transmission and distribution networks, water and wastewater treatment facilities, sanitary and stormwater systems, and infrastructure in Canada and the United States. With 3,500 employees, we are proud to be recognized among Canada's Top Employers for Young People, the Best 50 Corporate Citizens in Canada, and Alberta's Top Employers.

In the Southern Bruce area we will operate under our wholly owned subsidiary, EPCOR Natural Gas LP.

Interrogatory 5:

Reference: Exhibit A, Tab 3, Schedule 1, page 7

Preamble: *"EPCOR notes that natural gas service is expected to be available to the Bruce Energy Centre and the communities of Chelsey and Paisley for the 2019-2020 heating season contingent on Enbridge Gas competing the custody transfer station in November 2019."*

Questions:

(a) To the best of EPCOR's knowledge, what is the status of Enbridge Gas' custody transfer station work?

(b) To the best of EPCOR's knowledge, how will the Bruce Energy Centre and the communities of Chelsey and Paisley be impacted if the custody transfer station is not operational by November 2019?

(c) EPCOR expects the decision by the end of May 2019 to be able to begin construction in June 2019. Please discuss the impact of receiving the OEB's decision later than May 2019. When is the last day that EPCOR can receive the OEB's decision before construction is pushed to the following year?

Responses:

(a) In its letter to the OEB dated March 4, 2019 (EB-2018-0244) Enbridge Gas Inc. ("Enbridge") indicated that "…Enbridge will make every effort to complete the custody transfer station in 2019." In subsequent discussions with Enbridge, ENGLP understands that Enbridge is targeting November 1, 2019 as an in service date and that work has been initiated.

(b) ENGLP is scheduled to connect customers at the Bruce Energy Center in late 2019. If the custody transfer station is not operational by November 2019 that may directly impact that schedule. ENGLP's current construction schedule (See OEB Interrogatory 1a)) indicates that service to Chelsey and Paisley will be provided in November 2021. If the custody transfer station is not operational by November 2019 ENGLP would have to review its construction schedule to determine what impact a delay might have.

(c) If an OEB decision is received later than mid June 2019, some construction activities may still be possible in 2019, dependant on weather conditions as is the case with all projects; however, receiving a decision later than that time will impact ENGLP's ability to connect customers in the Bruce Energy Center in 2019 and possibly have subsequent impacts on construction completed in 2020. ENGLP would have to work with its construction contractor to confirm the final impact once a decision date is known. ENGLP intends to initiate construction as soon as an OEB decision is received.

Interrogatory 6:

Reference: Exhibit A, Tab 5, Schedule 1, page 2
Exhibit A, Tab 10, Schedule 1, page 1
Exhibit A, Tab 10, Schedule 2

Preamble: "*At the time the application was filed, the locations of the pressure regulating stations that will serve the distribution systems in each of the Southern Bruce Municipalities were approximate, and EPCOR said the locations will be finalized during detailed design."*

EPCOR states that the majority of the Preferred Route will be within existing road allowances, and that if any sections are outside road allowances, EPCOR will obtain an easement from private landowners or the appropriate authorities. EPCOR has also filed for approval of the form of the draft agreements that will be offered to affected landowners where the need for an easement arises."

Questions:

(a) Which, if any, of the station locations have been finalized? If there are any locations yet to be finalized, when does EPCOR expect to have them finalized?

(b) Do any of the finalized locations require land purchases or permanent easements? If so, which ones, and when does EPCOR expect to reach agreement?

(c) If any land purchases or easements are required for the Project, please describe the status of the negotiations and when EPCOR expects negotiations to be completed, and discuss any potential impact on the Project cost and schedule.

(d) Please provide a summary of any comments/concerns that have been brought up by any affected landowners regarding the Project to date.

(e) Please confirm that the forms of agreement filed by EPCOR are substantially similar to forms of agreement previously approved by the OEB and discuss any differences.

Responses:

(a) ENGLP has finalized the following station locations:

(i) Dornoch

(ii) Bruce Energy Centre

The stations identified above are the critical stations required for the 2019 construction season.

ENGLP is actively working to finalize the following stations. These stations will require land purchases:

(i) Chesley Expected to be finalized by June 30th 2019

(ii) Paisley Expected to be finalized by June 30th 2019

(iii) Tiverton Expected to be finalized by October 1st 2019

(iv) Inverhuron: Expected to be finalized by October 1st 2019

(v) Kincardine: Expected to be finalized by October 1st 2019

(b) Both the finalized stations listed above require a permanent easement. Initial discussions with these landowners have taken place. ENGLP expects to reach an agreement by June 30th 2019 or prior to requiring access to the lands.

(c) ENGLP has engage a land agent, whom is actively pursuing discussion with land owners of the other identified station locations. Contact with all landowners will be completed by May 31st, 2019.

Land purchases for the stations that have not been finalized are not critical for the Facilities planned for 2019 construction; however, ENGLP expects to have all these completed by the end of Fall 2019. ENGLP does not expect land purchases to have any effect on the project schedule or costs.

(d) To date landowners that have been approached have not had any negative comments or concerns. Please refer to Table OEB-6-1 for a summary of communication with landowners.

(e) The form of easement agreement remains the same as previously filed in this application, which ENGLP believes is substantially similar to those previously approved by the OEB.

Table OEB 6-1 : Land Owner Consultation Summary Report

TRACT	ID	INFRASTRUCTURE	STATUS	LANDOWNER	CONSULTATION SUMMARY
1	C	STATION	NOT YET CONTACTED	IONSON, ROY ALBERT; IONSON, JOAN MARILYN;	N/A
2	C1	STATION - ALTERNATE	NO AGREEMENT REQUIRED	MCCULLOCH, WILLIAM HUGH; MCCULLOCH, WYONNA LAURA ANN;	Agreement will be pursued if Landowner is not interested in preferred site location.
3	C2	STATION - ALTERNATE	NO AGREEMENT REQUIRED	KUEPFER, ALVIN;	Agreement will be pursued if Landowner is not interested in preferred site location.
4	VS1	VALVE SITE	NOT YET CONTACTED	THE TRUSTEES OF THE VESTA CONGREGATION OF THE METHODIST CHURCH;	N/A
5	P	STATION	NOT YET CONTACTED	WATSON, ROBERT JOHN MARSHALL; VANDERPLAS, KATHERINE LOUISE;	N/A
6	P1	STATION - ALTERNATE	NO AGREEMENT REQUIRED	ROZENDAAL, MARINUS;	Agreement will be pursued if Landowner is not interested in preferred site location.
7	P2	STATION - ALTERNATE	NO AGREEMENT REQUIRED	CALALAN FARMS LTD.;	Agreement will be pursued if Landowner is not interested in preferred site location.
8	VS2	VALVE SITE	NOT YET CONTACTED	SOUSA, GABRIEL MEDEIROS; SOUSA, ALMERINDA MACEDO;	N/A
9	PSA1	PIPE STORAGE AREA	LANDOWNER NOT INTERESTED	TURUSS (CANADA) INDUSTRY CO., LTD.;	Land Agent contacted the Plant Manager for the property to discuss the lease agreement. The Plant Manager explained that they would have to consult with the Property Manager and owner of the property (Landowner) to discuss the possibility of a pipe storage area. The Plant Manager met

TRACT	ID	INFRASTRUCTURE	STATUS	LANDOWNER	CONSULTATION SUMMARY
					with the Property Manager to discuss the potential lease. The Property Manager further discussed the site with the Landowner and it was determined that the lands would not be available for the storage site.
10	PSA2	PIPE STORAGE AREA	AGREEMENT REACHED	SNAKE CREEK FARMS LTD.;	Land Agent initiated contact via phone with Landowner. Landowner agreed to meet on site with Land Agent to discuss the lease agreement. Landowner was agreeable to the terms of the lease agreement and saw no issues with the site location. Landowner signed agreement and Land Agent will send to EPCOR for final execution.
11	TL1	TEMPORARY LAND USE AREA	NO AGREEMENT REQUIRED	PUBLIC AUTHORITY HAVING JURISDICTION;	N/A
12	TL2	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	BAKER, RANDALL ARTHUR;	Land Agent contacted Landowner via phone to discuss lease agreement. Land Agent met with Landowner and left agreement documents for their review. Land Agent met again with Landowner to discuss concerns with Temporary Land Use Area (TLUA) location. Landowner requested a $200.00 payment for lost farm rental space. Landowner also requested a terminate date for the agreement. Landowner noted that the access for the TLUA location may be blocking an entrance from the road. A rock pile may have to be moved to allow access, if necessary.
13	TL3	TEMPORARY LAND USE AREA	AGREEMENT REACHED	VAN ECK, JOHN; VAN ECK, ELLNOR;	Land Agent contacted Landowner via phone to discuss lease agreement. Land Agent met with Landowner on site and they agreed to the terms of the agreement. Landowner signed agreement and Land Agent will send to EPCOR for final execution.
14	TL4	TEMPORARY LAND USE AREA	NO AGREEMENT REQUIRED	PUBLIC AUTHORITY HAVING JURISDICTION;	N/A
15	TL5	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	IONSON, ROY ALBERT; IONSON, JOAN MARILYN;	Land Agent met with Landowner to discuss the lease agreement. Landowner expressed concern for livestock on property and requested that temporary fencing be added to

TRACT	ID	INFRASTRUCTURE	STATUS	LANDOWNER	CONSULTATION SUMMARY
					the agreement terms. Temporary fencing will be required.
16	TL6	TEMPORARY LAND USE AREA	AGREEMENT REACHED	MCCULLOCH, WILLIAM HUGH; MCCULLOCH, WYONNA LAURA ANN;	Land Agent visited the site location and spoke with the Tenants of the property. They provided the Land Agent with the Landowners contact information. Land Agent contacted Landowner via phone and scheduled a meeting at their residence. Land Agent met with Landowner and they had no issues with the terms of the agreement. Landowner signed agreement and Land Agent will send to EPCOR for final execution.
17	TL7	TEMPORARY LAND USE AREA	AGREEMENT REACHED	FORTUNE, CLARK W.;	Land Agent visited the Landowners residence (site) to discuss the agreements (2). Land Agent left agreement documents with Landowner for review. Landowner contacted Land Agent to inform them that they had signed both agreement and they were ready for pick up. Land Agent will send to EPCOR for final execution.
18	TL8	TEMPORARY LAND USE AREA	AGREEMENT REACHED	FORTUNE, CLARK W.;	Land Agent visited the Landowners residence (site) to discuss the agreements (2). Land Agent left agreement documents with Landowner for review. Landowner contacted Land Agent to inform them that they had signed both agreement and they were ready for pick up. Land Agent will send to EPCOR for final execution.
19	TL9	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	THE CORPORATION OF THE COUNTY OF BRUCE;	Land Agent met with County Transportation Engineering Technician to discuss the lease agreement. County Transportation Engineering Technician informed the Land Agent that they would provide the lease agreement to their superiors and the organization would reach a decision internally then get back to the Land Agent.
20	TL10	TEMPORARY LAND USE AREA	AGREEMENT REACHED	SOUSA, GABRIEL MEDEIROS; SOUSA, ALMERINDA MACEDO;	Land Agent met with Landowners on site to discuss lease agreement. Landowners saw no issues with the agreement. Landowner signed agreement and Land Agent will send to EPCOR for final execution.
21	TL11	TEMPORARY LAND USE AREA	NOT YET CONTACTED	PARKER, LESLIE;	Land Agent tried contacting Landowner via phone with no success. Land Agent had asked other Landowners if they had their contact information and none of the Landowner

TRACT	ID	INFRASTRUCTURE	STATUS	LANDOWNER	CONSULTATION SUMMARY
					were able to provide any.
22	TL12	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	RUTHVEN, DENNIS WILFRED;	Land Agent met with Landowner on site to discuss lease agreement. Land Agent left agreement documents with Landowner for review. Land Agent will follow up shortly to see if Landowner is agreeable to sign.
23	TL13	TEMPORARY LAND USE AREA	AGREEMENT REACHED	SNAKE CREEK FARMS LTD.;	Land Agent initiated contact via phone with Landowner. Landowner agreed to meet on site with Land Agent to discuss the lease agreement. Landowner was agreeable to the terms of the lease agreement and saw no issues with the site location. Landowner signed agreement and Land Agent will send to EPCOR for final execution.
24	TL14	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	ROPPEL, JOHN PHILIPPE;	Land Agent met with Landowner to discuss lease agreement. Landowner informed them that they are planning to sell the property within a matter of days. Landowner agreed to provide Land Agent the contact information of the new Landowner.
25	TL15	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	ROPPEL, RONALD ANGUS; ROPPEL, ANNE ISABEL;	Land Agent contacted Landowner via phone. Land Agent set up meeting with Landowner to discuss lease agreement.
26	TL16	TEMPORARY LAND USE AREA	NO AGREEMENT REQUIRED	PUBLIC AUTHORITY HAVING JURISDICTION;	N/A
27	TL17	TEMPORARY LAND USE AREA	NOT YET CONTACTED	REICHARD, SCOTT TIMOTHY;	Land Agent has not established contact. Land Agent attempted to call Landowner with no success. Land Agent will keep investigating contact methods.
28	TL18	TEMPORARY LAND USE AREA	NEGOTIATIONS IN PROGRESS	GALASZKIEWICZ, KRYSTYNA (DECEASED);	Land Agent investigated the status of the Landowner to find that they are deceased. Land Agent found contact information for the Executor of the estate (Executor). Land Agent spoke with Executor and set up a meeting to discuss the lease agreement.
29	T1	STATION	NOT YET CONTACTED	1210987 ONTARIO INC.	N/A
30	T2	STATION - ALTERNATE	NO AGREEMENT	HOPPER, WAYNE STANLEY	Agreement will be pursued if Landowner is not interested in preferred site location.

TRACT	ID	INFRASTRUCTURE	STATUS	LANDOWNER	CONSULTATION SUMMARY
			REQUIRED		
31	VS3	VALVE SITE	NOT YET CONTACTED	BEC BUSINESS & INNOVATION CENTRE INC.;	N/A
32	I	STATION	NOT YET CONTACTED	THE CORPORATION OF THE TOWNSHIP OF KINCARDINE;	N/A
33	I1	STATION - ALTERNATE	NO AGREEMENT REQUIRED	THE CORPORATION OF THE MUNICIPALITY OF KINCARDINE;	Agreement will be pursued if Landowner is not interested in preferred site location.
34	I2	STATION - ALTERNATE	NO AGREEMENT REQUIRED	THE CORPORATION OF THE TOWNSHIP OF KINCARDINE;	Agreement will be pursued if Landowner is not interested in preferred site location.
35	I3	STATION - ALTERNATE	NO AGREEMENT REQUIRED	MARTIN, KENNETH BRUBACHER; MARTIN, RITA BEVERLEY;	Agreement will be pursued if Landowner is not interested in preferred site location.
36	K1	STATION - ALTERNATE	NO AGREEMENT REQUIRED	WEST RIDGE ON THE LAKE INC.	Agreement will be pursued if Landowner is not interested in preferred site location.
37	K2	STATION - ALTERNATE	NO AGREEMENT REQUIRED	ONTARIO PENINSULA FARMS LTD.	Agreement will be pursued if Landowner is not interested in preferred site location.
38	K3	STATION	NOT YET CONTACTED	ONTARIO PENINSULA FARMS LTD.	N/A

Interrogatory 7:

Reference: Exhibit A, Tab 3, Schedule 1, pages 2 and 4
Exhibit A, Tab 7, Schedule 1, pages 1-7
EB-2016-0137 / 0138 / 0139, Common Infrastructure Proposal, page 6

Preamble: "*Ontario's Access to Natural Gas Act, 2018 will provide up to $22 million to the Project.*[1] *For the purposes of calculating the three key CIP criteria, the OEB instructed EPCOR and Enbridge Gas to exclude any potential government funding, upstream reinforcement and capital contributions from customers.*[2] *EPCOR included in its CIP the three key CIP criteria reported in Table 1 below. EPCOR must demonstrate that its leave to construct application and rates application*[6] *are consistent with its CIP proposal.*[7]

Table 1: EPCOR's Key CIP Criteria and Revenue Requirement

Metric	Value
Cumulative 10-Year Revenue Requirement per Unit of Volume	$0.2209/m^3
Customer Years	42,569 Customer Years
Cumulative 10-Year Throughput Volume	342,186,741m^3
Cumulative 10-Year Revenue Requirement	$75,583,261

EPCOR estimates the total capital cost of the Project to be $87,089,000, which is one component of the cumulative revenue requirement included in its CIP.
EPCOR has identified 20 potential industrial/agricultural customers in the Southern Bruce Municipalities. Contractual discussions with industrial customers are expected to conclude prior to construction start.
At one point, EPCOR had proposed that the co-construction of a water pipeline and fibre optics network during the construction of the natural gas lines in the South Bruce Municipalities could result in synergies.
EPCOR has filed a concurrent rate application (EB-2018-0264) for its South Bruce Rate Zone."

[1] https://www.ontario.ca/laws/regulation/190024
[2] EB-2016-0137/0138/0139 - Procedural Order No. 8, August 22, 2017, pages 9-10

Questions:

(a) How does the $22 million in government funding affect the cumulative 10-year revenue requirement calculated by EPCOR for its CIP?
(b) How will the $22 million in government funding affect the rates that EPCOR intends to charge its customers?
(c) Please provide an update on contract discussions with the industrial customers.
(d) Please perform a DCF analysis and report a NPV for the Project based on the proposed rates and forecast customer attachments.
(e) Will some or all industrial customers be required to pay a capital contribution towards the Project?
(f) How do any capital contributions from industrial customers affect the revenue requirement calculated by EPCOR for its CIP?
(g) How do any capital contributions from industrial customers affect the rates that EPCOR intends to charge its other customers?
(h) Does EPCOR intend to install water pipeline and fibre optics network during the construction of the natural gas lines in the South Bruce Municipalities? If so, how do any capital efficiencies affect the revenue requirement calculated by EPCOR for its CIP?
(i) If EPCOR intends to install water pipeline and fibre optics during the construction of the natural gas lines, how do any capital efficiencies associated with water pipeline and fibre optics network affect the rates that EPCOR intends to charge its other customers?
(j) If EPCOR intends to install water pipeline and fibre optics during the construction of the natural gas lines, how will EPCOR ensure appropriate allocation of capital costs between water pipeline, fibre optic and natural gas works?

Responses:

(a) The $22.0 million in funding arising from Bill 32 will reduce the cumulative 10-year revenue requirement by $14.912 million. ENGLP notes that this value is subject to update once the actual timing of receipt of the funds is confirmed. See Table OEB-7-1 below for a calculation of that value.
(b) See response to (a).
(c) ENGLP is continuing negotiations with the two major industrial customers that the Southern Bruce system is expected to service. Discussions have been productive and it appears at this time that the parties will be able to resolve any outstanding issues. It has been agreed that any outstanding concerns regarding rates and terms of service will be adjudicated as part of ENGLP's rate application (EB-2018-0264).

(d) A basic principle of the competitive process through which ENGLP was awarded CPCNs for the South Bruce municipalities[3] was that within the set of common parameters under which it submitted its Common Infrastructure Proposal ("CIP"), the winning proponent would accept the risk associated with having a bid with a cumulative 10-year revenue requirement that was sufficient to cover costs to the extent that the NPV of the project was acceptable to the winning proponent. ENGLP re-confirms that it continues to be aligned with that basic principle. Given that, within the set of common parameters under which it submitted it's CIP, the risk of achieving an acceptable NPV remains with ENGLP, the concept of an NPV or profitability index that meets certain criteria is not applicable to this Application.

(e) ENGLP is not proposing that any of the industrial customers that it is in discussions with be required to pay a capital contribution towards the project. Please see ENGLP response to OEB Interrogatory 8a).

(f) See (e) above.

(g) See (e) above.

(h) ENGLP currently has no plans to install water pipeline or fibre optics during the construction of the natural gas lines in the South Bruce Municipalities.

(i) See (h) above.

(j) See (h) above.

[3] EB-2016-0137/0138/0139

Table OEB-7-1
Impact of Government Funding on Revenue Requirement

(Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Cumulative
Row 1	Balance Brought Forward	0	8,544	21,591	21,001	20,411	19,821	19,231	18,641	18,051	17,461	164,752
Row 2	Additions (Including IDC)	8,663	13,659	0	0	0	0	0	0	0	0	22,322
Row 3	Depreciation	-119	-612	-590	-590	-590	-590	-590	-590	-590	-590	-5,450
Row 4	Closing Balance	8,544	21,591	21,001	20,411	19,821	19,231	18,641	18,051	17,461	16,871	181,623
Row 5												
Row 6	Mid-Year Grant Funded Asset	4,272	15,067	21,296	20,706	20,116	19,526	18,936	18,346	17,756	17,166	173,187
Row 7												
Row 8	Return on Grant Funded Asset	233	823	1,163	1,131	1,099	1,067	1,035	1,002	970	938	9,462
Row 9	Depreciation Recovery	119	612	590	590	590	590	590	590	590	590	5,450
Row 10												
Row 11	**Total Revenue Requirement Impact**	**352**	**1,435**	**1,753**	**1,721**	**1,689**	**1,657**	**1,624**	**1,592**	**1,560**	**1,528**	**14,912**

Interrogatory 8:

Reference: Exhibit A, Tab 5, Schedule 1, page 2
Exhibit A, Tab 6, Schedule 1, page 7
Exhibit A, Tab 7, Schedule 1, pages 1-7

Preamble: **"***EPCOR estimates the capital cost of construction and materials to be approximately $72,660,000 or about 83% of the $87,089,000 total capital cost of the Project.*
EPCOR will design and install a Supervisory Control and Data Acquisition SCADA) system to continuously monitor and the distribution system and ensure reliability.
EPCOR included a 4.7% contingency in the capital cost of the Project.
EPCOR will solicit the services of a reputable construction company, AECON Utilities, to complete the construction and installation of the mainline."

Questions:

OEB staff understands that these questions may be more related to the setting of rates, but to allow for a comprehensive record and allow staff to confirm that the CIP is indeed reflected in the LTC application.

(a) Please confirm whether the $87,089,000 includes capital costs associated with the distribution systems in each of the South Bruce Municipalities (e.g., mains, service lines, meter sets).
(b) Please confirm that the $87 million described in the CIP is the same amount that underpins the revenue requirement in the CIP. Please show all calculations supporting that the numbers are unchanged (e.g. show how the revenue requirement for each year for the next ten years adds up to the 10 year revenue requirement in the CIP).
(c) Did EPCOR complete a request for proposal or similar process in order to select AECON Utilities as its pipeline constructor? If not, please explain the process by which AECON Utilities was selected.
(d) Briefly explain any strategies EPCOR will employ to reduce the capital costs of materials.
(e) Are the capital costs of the SCADA system included in the capital costs of the Project? If not, please explain how EPCOR intends to recover the capital costs of the SCADA system?

(f) OEB staff observes that other gas utilities in Ontario typically include a contingency in their capital costs of 10% or more.[8] Please briefly explain how EPCOR is able to use a contingency that is lower than that of other gas utilities in Ontario.

(g) Based on the experience of EPCOR's parent company and affiliates, please compare and contrast the total estimated capital cost per meter of the Project to at least three comparable projects completed within the last ten years for benchmarking purposes.

Responses:

(a) ENGLP confirms that the $87,089,000 includes capital costs associated with the distribution system (including service mains, services and meters) in each of the South Bruce Municipalities.

(b) ENGLP confirms that the $87 million described in the CIP is the same amount that underpins the revenue requirement in the CIP. ENGLP's CIP included a cumulative revenue requirement of $75.583 million for the 10-year rate stability period which was built up using the $87 million. Calculations confirming that ENGLP's revenue requirement is consistent with its CIP have been addressed in its rates application. For informational purposes, ENGLP has provided the support that its revenue requirement is consistent with its CIP below. Table OEB-8-1 includes adjustments to the $75.583 million revenue requirement to reflect commitments made in the CIP, including the value of the $22.0 million in external funding, the value of the municipal tax holidays and LEAP funding. The resulting cumulative revenue is $58,534,551.

[8] E.g., 10% in Union Gas Limited's 2015 Community Expansion, EB-2015-0179 and 10% in Enbridge Gas Distribution Inc.'s Fenelon Falls Community Expansion, EB-2017-0147.

Table OEB 8-1: Distribution Revenue Requirement Adjustment

	Description	Col. 1 Calculation	Col. 2 Cumulative
1	CIP Revenue Requirement		75,583
2			
3	Adjustments		
4	Less: External Funding		-14,912[9]
5	Less: Municipal Tax Holidays		-2,208
6	Add: LEAP Funding		72
7	**Adjusted Distribution Revenue Requirement**	SUM (Row1:Row6)	58,534,551

Table OEB-8-2 shows the revenue requirement for each year of the 10-year rate stability period which in total equals the adjusted revenue requirement of $58.535 million.

Table OEB 8-2: Revenue Requirement by Year

(Thousands of Dollars)

	EPCOR Southern Bruce System	Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Cumulative
1	Distribution Revenues	589	3,050	4,621	5,818	6,646	7,190	7,455	7,594	7,727	7,846	58,535

[9] The depreciation and return on the assets funded by the external fund is deducted from EPCOR's CIP revenue requirement over the rate stability period.

(c) ENGLP has successfully partnered with AECON in a number of competitive P3 RFPs in Canada. In winning these projects the companies have proven they are competitive as a team. In building its team to bid on the South Bruce project EPCOR approached AECON to determine alignment regarding the type of project, risk sharing and level of experience necessary to be successful the parties agreed to partner for the project. The cost competitiveness of the team was confirmed when the Board selected EPCOR as the proponent with the most favourable proposal.

(d) ENGLP notes that, within the framework of the common parameters under which it developed its CIP, it has accepted the risk of capital cost overruns and the capital costs as included in its CIP are those that support its revenue requirement.

(e) The capital cost of the SCADA system are included in the capital costs of the project.

(f) ENGLP is unaware of the process that Union Gas Limited and Enbridge Gas Distribution Inc. used in determining the respective contingency for the projects highlighted in the IR. ENGLP does point out that its understanding is that those projects were not subject to a competitive process. As it relates to determining the contingency for the South Bruce project, ENGLP worked closely with its contractors in determining the optimal design and construction methods as well as which party can most effectively mitigate the various risks associated with a large construction project. Once the parties agree on the most cost effective manner in which to allocate risk, that party accepts the risk and works diligently to manage those risks. This approach has allowed ENGLP, and its affiliates, to be cost and quality competitive in competitive processes.

(g) This is the first large construction project related to a green-field natural gas distribution system that ENGLP's parent company or affiliates have undertaken. As a result, it does not have comparable projects for which it can compare and contrast the total estimated capital cost per meter of the project.

Interrogatory 9:

Reference: Exhibit A, Tab 7, Schedule 1, Table 2, page 6
Exhibit A, Tab 3, Schedule 4

Preamble: *"EPCOR provides the customer forecast from its CIP in Table 2 (below). EPCOR also provided the survey results from its July 2017 survey on the likelihood of residential customers in the area converting to natural gas. The survey concluded that 58% of the residents "Definitely Would Convert" or "Would Likely Convert". EPCOR used a 60% target as the overall 10-year capture rate for residential customers."*

Table 2 - CIP Customer Forecast

Customer Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Cumulative
Existing Residential	861	2,297	3,237	3,742	4,176	4,349	4,349	4,349	4,349	4,349	36,058
New Residential	46	103	159	215	271	328	384	424	462	469	2,861
Sub Total	**907**	**2,400**	**3,396**	**3,957**	**4,447**	**4,677**	**4,733**	**4,773**	**4,811**	**4,818**	**38,919**
Small Commercial	55	144	215	288	343	359	359	359	359	359	2,840
Medium Commercial	10	27	43	59	67	69	69	69	69	69	551
Large Commercial	3	7	13	16	17	19	19	19	19	19	151
Sub Total	**68**	**178**	**271**	**363**	**427**	**447**	**447**	**447**	**447**	**447**	**3,542**
Small Agricultural	0	0	0	1	2	2	2	2	2	2	13
Industrial and Large Agricultural	4	5	9	11	11	11	11	11	11	11	95
Sub Total	**4**	**5**	**9**	**12**	**13**	**13**	**13**	**13**	**13**	**13**	**108**
Grand Total	979	2,583	3,676	4,332	4,887	5,137	5,193	5,233	5,271	5,278	42,569

Questions:

(a) Please confirm that the customer addition forecast that underpins the economics of the Project has not changed since that proposed in the CIP and reported in Table 3 above. If it is not, please identify and explain the reasons for any differences.

(b) Please explain why EPCOR used a 60% capture rate instead of 58%.

(c) What will EPCOR do if its customer connection forecast fails to materialize?

(d) How would EPCOR's ratepayers be affected after the rate stability period if the actual customer connections are materially less than forecast?

(e) Please confirm that the cost ratios provided to survey participants reflected the total delivered cost of the various fuel types compared to the total delivered cost of

EPCOR providing natural gas.

Responses:

(a) The customer addition forecast has changed from that proposed in the CIP. The customer addition forecast in the CIP was based on a "common construction schedule for gas mains, based on certain assumed timelines for OEB decisions"[1]. These assumed timelines for OEB decisions were developed in order to create a common starting point for which the proponents could develop their CIPs. As included in Table OEB-9-1, there are material changes between the assumed timelines for OEB decisions included as a common assumption in the CIP versus the actual / forecast dates. This includes an almost ten month delay expected in timing of receipt of a decision on this leave to construct application. While ENGLP has been able to mitigate some of that ten month delay, it has driven a three month delay in the start of construction. The three month delay in beginning construction translates into losing a material portion of the 2019 construction season. This has pushed the ability of ENGLP to connect certain customers by up to a year, reshaping the customer connection profile as system availability is delayed.

Table OEB 9-1: Common Construction Schedule in CIP vs Actual / Forecast

	Activity	Col 1 Common Parameter	Col 2 Actual / Forecast Date	Col 3 Difference (months)
1	Decision on the elements of an appropriate bidding framework on which the competitors seek further direction from the OEB	August 2017	July 20, 2017 – OEB Staff Progress Update: South Bruce Expansion Applications OEB file No: EB-2016-0137/0138/ 0139	(1)
2	Proposals for competition due	October 2017	October 16, 2017	0
3	Decision for successful proponent	December 2017	April 12, 2018 - Decision and Order EB-2016-0137/0138/ 0139	3

[1] OEB Staff Progress Update: South Bruce Expansion Applications OEB File No. EB-2016-0137/038/0139, July 20, 2017, Construction Schedule, Pages 5 – 6.

4	Filing of pre-filed evidence for LTC, rates, Franchise and Certificate application	March 2018	September 20, 2018 - LTC[2]; October 2, 2018 - Rates Application	5
5	LTC approval	August 2018	June 2019[3] - Forecast	10
6	Construction begins in South Bruce	March 2019	July 2019 - Forecast	3

The updated customer attachment forecast is included in Table OEB-9-2 and is driven by the revised construction schedule. ENGLP notes that the new customer attachment forecast is more aggressive that the forecast included in its CIP, with total customers attached catching up to its CIP values by 2021.

Table OEB-9-2: Customer Connections CIP vs Updated Construction Schedule

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1	Customer Connections CIP	979	2,583	3,676	4,332	4,887	5,137	5,193	5,233	5,271	5,278
Row 1	New Construction Schedule	2	1,292	3,676	4,332	4,887	5,137	5,193	5,233	5,271	5,278

(b) ENGLP used a 60% capture rate instead of 58% as it expected some level of conversion by customers who gave responses other than they would "definitely" or "likely" convert.

(c) ENGLP will continue to review the success of its conversion strategy over the life of the project. If the connection forecast fails to develop as anticipated, ENGLP will work to determine the cause and implement measures to increase customer connections.

(d) After the 10-year rate stability period, ENGLP will file a rate application that will implement the OEB's then current cost of service framework. There are a number of factors that may affect ratepayers as a result of that transition. Those factors include

[2] As per EB-2016-0137/0138/ 0139 Decision And Order April 12, 2018, page 14, Section 5 Order, paragraph 4, EPCOR had until October 12, 2018 to file a leave to construct

[3] On November 29, 2018 the OEB filed a letter with EPCOR indicating that the LTC and Rate Application for Southern Bruce was placed in abeyance. On March 21, 2019 the OEB issued a letter indicating that it will commence processing the LTC. See Exhibit 6, Tab 1, Schedule 2 for copies of the letters.

actual number of customer attachments, the mix of customer types, the actual gas volumes delivered by customer type, and actual operations and maintenance costs. Each of those factors will have a differing affect on ratepayers and some would tend to offset others e.g. lower customer connections may reduce operations and maintenance costs. If actual customer connections are materially less than forecast, then the rates in a cost of service environment would tend to trend upward.

(e) Confirmed

Interrogatory 10:

Reference: Exhibit A, Tab 7, Schedule 1, Table 3, page 7
EB-2016-0137|-0138|-0139 EPCOR CIP Application, Schedule D, page 3 "Table D – Volumes"

Preamble: *"EPCOR provides a volumetric forecast in Table 3.*

Table 3 - CIP Throughput Volumes (m^3)

Customer Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Cumulative
Existing Residential	925,145	3,393,271	5,946,283	7,498,936	8,507,891	9,160,113	9,346,001	9,346,001	9,346,001	9,346,001	72,815,642
New Residential	47,518	153,917	270,646	386,342	502,038	618,767	735,496	834,664	915,238	961,723	5,426,349
Sub Total	**972,663**	**3,547,188**	**6,216,929**	**7,885,278**	**9,009,929**	**9,778,880**	**10,081,497**	**10,180,665**	**10,261,239**	**10,307,724**	**78,241,991**
Small Commercial	129,058	466,954	842,394	1,180,290	1,480,642	1,647,243	1,684,787	1,684,787	1,684,787	1,684,787	12,485,727
Medium Commercial	134,665	498,261	942,655	1,373,583	1,696,779	1,831,444	1,858,377	1,858,377	1,858,377	1,858,377	13,910,895
Large Commercial	113,528	378,425	756,850	1,097,433	1,248,803	1,362,330	1,438,015	1,438,015	1,438,015	1,438,015	10,709,428
Sub Total	**377,250**	**1,343,639**	**2,541,899**	**3,651,305**	**4,426,223**	**4,841,017**	**4,981,179**	**4,981,179**	**4,981,179**	**4,981,179**	**37,106,049**
Small Agricultural	0	0	0	2,360	7,080	9,440	9,440	9,440	9,440	9,440	56,640
Industrial and Large Agricultural	4,063,779	23,760,251	24,187,482	24,798,991	24,985,073	24,985,073	25,028,741	25,002,523	24,985,073	24,985,073	226,782,062
Sub Total	**4,063,779**	**23,760,251**	**24,187,482**	**24,801,351**	**24,992,153**	**24,994,513**	**25,038,181**	**25,011,963**	**24,994,513**	**24,994,513**	**226,838,702**
Grand Total	**5,413,691**	**28,651,078**	**32,946,310**	**36,337,933**	**38,428,305**	**39,614,410**	**40,100,857**	**40,173,807**	**40,236,931**	**40,283,416**	**342,186,741**

EPCOR provided the following volumetric forecast in its CIP Application:"

Table D3 - Volumes

Customer Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total Available Market
Existing Residential (m^3)	925,145	3,393,271	5,946,283	7,498,936	8,507,891	9,160,113	9,346,001	9,346,001	9,346,001	9,346,001	15,580,250
New Residential (m^3)	47,518	153,917	270,646	386,342	502,038	618,767	735,496	834,664	915,238	961,723	1,613,546
Sub Total	**972,663**	**3,547,188**	**6,216,929**	**7,885,278**	**9,009,929**	**9,778,880**	**10,081,497**	**10,180,665**	**10,261,239**	**10,307,724**	**17,193,796**
Small Commercial (m^3)	129,058	466,954	842,394	1,180,290	1,480,642	1,647,243	1,684,787	1,684,787	1,684,787	1,684,787	2,599,077
Medium Commercial (m^3)	134,665	498,261	942,655	1,373,583	1,696,779	1,831,444	1,858,377	1,858,377	1,858,377	1,858,377	2,869,550
Large Commercial (m^3)	113,528	378,425	756,850	1,097,433	1,248,803	1,362,330	1,438,015	1,438,015	1,438,015	1,438,015	2,091,631
Sub Total	**377,250**	**1,343,639**	**2,541,899**	**3,651,305**	**4,426,223**	**4,841,017**	**4,981,179**	**4,981,179**	**4,981,179**	**4,981,179**	**7,560,257**
Small Agricultural (m^3)	-	-	-	2,360	7,080	9,440	9,440	9,440	9,440	9,440	33,040
Industrial and Large Agricultural (m^3)	5,626,889	33,095,244	33,548,693	34,177,652	34,363,734	34,363,734	34,363,734	34,363,734	34,363,734	34,363,734	34,942,066
Sub Total	**5,626,889**	**33,095,244**	**33,548,693**	**34,180,012**	**34,370,814**	**34,373,174**	**34,373,174**	**34,373,174**	**34,373,174**	**34,373,174**	**34,975,106**
Grand Total	**6,976,802**	**37,986,071**	**42,307,521**	**45,716,594**	**47,806,966**	**48,993,071**	**49,435,850**	**49,535,018**	**49,615,592**	**49,662,077**	**59,729,159**

Questions:

(a) Please explain why the volumetric forecast for Industrial and Large Agricultural customers in the LTC application is different from that of the CIP. Please discuss the impact this difference has on the three key CIP criteria.

Responses:

(a) In its October 2017 CIP submission, ENGLP provided its volumetric forecast in Table D3 – Volume, presenting capacity volume for large agricultural and industrial customers. In Procedural Order 9, Interrogatory #2(b) (EB-2016-0137|-0138|-0139), the board asked ENGLP to provide updated CIP values and metrics using an annual normalized average consumption (NAC) approach for large agricultural and industrial customers. On January 11, 2018, ENGLP provided[1] updated volumes for large agricultural and industrial customers using an annual NAC approach which resulted in a Cumulative 10 year Volume of 342,186,741 m^3. From this point on, the NAC volumes were used and are shown in Table 3, provided in the LTC application.

ENGLP confirms that there is no impact of this difference on the three key CIP criteria submitted in its LTC in Table 1 – Key Metrics and Revenue Requirement.

[1] EB-2016-0137|-0138|-0139, EPCOR Responses to Interrogatories Table 2(b), dated January 11, 2018.

Interrogatory 11:

Reference: Exhibit A, Tab 7, Schedule 1, page 3

Preamble: *"The OEB's Partial Decision on the Issues List in the CIP Proceeding stated that during the rate stability period the proponent's revenue related to its controllable costs will be capped at its proposed level; the rate stability period may include an allowance for consideration of externally driven, unforeseen events as well as annual financial allowance updates typically allowed by the OEB*[9]*"*

Questions:

(a) To date, has EPCOR identified any externally driven, unforeseen events associated with its leave to construct application for which it may seek to pass through costs to its consumers within the rate stability period? If so, please list and briefly describe the events and for each include an estimate of costs, if possible.

(b) If events were identified in part (a), please describe the potential monthly residential bill impact that could arise from the total cost of all events.

Responses:

(a) ENGLP has identified externally driven, unforeseen events associated with its leave to construct application (more specifically timelines for OEB decision which have subsequently directly impacted its construction schedule) for which it will seek to pass through costs to its consumers within the rate stability period. ENGLP is of the view that issues related to recovery of distribution costs are more appropriately addressed in its rates application (EB-2018-0264). However, in order to fully respond to this IR, ENGLP has provided information included in that application for informational purposes.

As background, one of the common assumptions used by the proponents when developing their CIPs was a common construction schedule[10]. This common schedule included a LTC approval date of August 2018. As of the date on which ENGLP responded to this IR it is expected that a decision related to LTC will be made by mid

[9] EB-2016-0137/0138/0139: Partial Decision on the Issues List and PO No.6, June 27, 2017; pg. 4

[10] OEB Staff Progress Update: South Bruce Expansion Applications OEB File No: EB-2016-0137/0138/ 0139, July 20, 2017, Construction Schedule, Pages 5 - 6

June 2019. This approximate 10 month delay has directly impacted ENGLP's construction schedule and therefore its ability to achieve the customer connection forecast included in its CIP. (Please see response to OEB Interrogatory 1a) for details regarding the impact on the construction schedule and OEB Interrogatory 9a) for details regarding direct impact on customer connection forecast.)

The additional externally driven, unforeseen events that impacted the timelines for OEB decisions include the following.

- After filing its leave to construct, ENGLP received notification from Ontario Infrastructure on September 26, 2018 that the province would no longer be providing the $22.0 million previously awarded through its Natural Gas Grant Program ("NGGP").
- On November 29, 2018 the OEB informed ENGLP that it had placed the leave to construct and rates applications into abeyance as a result of the loss of NGGP funding.
- On March 7, 2019 the Government of Ontario filed Ontario Regulation 24/19 *Expansion of Natural Gas Distribution Systems* which stated in Schedule 1 that the Southern Bruce Project was eligible for rate protection up to $22.0 million.
- On March 21, 2019 the OEB informed ENGLP that it would commence processing the leave to construct application.

The delay in connecting customers driven by the change in construction schedule has impacted ENGLP's ability to generate revenue and resulted in a revenue shortfall. For informational purposes, as included in Table OEB-11-1 the NPV of the revenue deficiency is $1.640 million.

Table OEB 11-1: Summary of Revenue Deficiency ($000)

	Description	Col. 1 NPV of Revenue Deficiency
1	Change in Customer Connection Profile - Forgone Revenue	2,324
2	Delay in Property Taxes - Forgone Cost	(224)
3	Change in Capital Expenditure Profile - Forgone Cost	(460)
4	Sum	**1,640**

(b) The potential monthly residential bill impact that could arise from the total costs of the events detailed in a) are outside the scope of the Application and have been addressed in Exhibit 6 of ENGLP's rates application (EB-2018-0264).

Interrogatory 12:

Reference: Exhibit A, Tab 7, Schedule 1, page 5

Preamble: *"EPCOR intends to share certain staff between its Aylmer and South Bruce operations facilities, the costs will be determined on a fully allocated basis, consistent with the OEB's requirements in Procedural Order 8 of the CIP process."*

Questions:

(a) Please provide a list of the job titles of Aylmer staff who may provide services to the South Bruce operations. For each job title, please include a brief description of the services that may be provided.

Responses:

(a) There are two Alymer staff that will provide services to the South Bruce operations, the General Manager and the Administration & Field Supervisor. The General Manager will provide general oversight and direction related to the ongoing operations of the South Bruce utility, with the South Bruce Field Supervisor reporting directly to this individual. This individual will not be involved in providing oversight or direction related to the construction of the gas distribution system.

The Administration & Field Supervisor will provide oversight and direction to the two South Bruce administrative staff. This will include activities related to ongoing operations such as customer inquiries and the billing function. This individual will not be involved in providing oversight or direction related to the construction of the gas system.

Interrogatory 13:

Reference: Exhibit A, Tab 8, Schedule 1, page 1

Preamble: *"EPCOR will enter into an Interconnect Operating agreement with Enbridge Gas; such interconnection point will be known as Dornoch. Enbridge Gas will be the sole upstream supplier to EPCOR. EPCOR and Enbridge Gas will enter into a firm upstream Transportation Agreement approved by the OEB. The agreements between EPCOR and Enbridge Gas will ensure the 10-year capacity needs of EPCOR's Southern Bruce system and is consistent with the 10-year capacity projection in the CIP."*

Questions:

(a) Will EPCOR be required to pay Enbridge Gas a capital contribution toward any facilities Enbridge Gas will need to construct in order to supply gas to EPCOR? If so, what is the amount of the capital contribution?

(b) Does EPCOR foresee any expansion opportunities beyond year 10 at this point? If so, does EPCOR foresee any issues obtaining additional gas supply from Enbridge Gas (or other sources) to facilitate that expansion?

Responses:

(a) Enbridge has indicated that their current estimate is that they will require capital contributions of $2.363 million relating to the Owen Sound Reinforcement and $2.935 million relating to the customer station at Dornoch. This level of capital contribution is subject to an update by Enbridge. ENGLP does not agree with the requirement to pay a capital contribution related to Enbridge's Owen Sound Reinforcement and has intervened in Enbridge's Rate M17 Firm Transportation Service Application (EB-2018-0244) in order to obtain a decision regarding this matter. Enbridge has sought to withdraw that application, with the stated intent of addressing the M17 service in a leave to construct application to be filed in relation to Owen Sound Reinforcement.

(b) At this time ENGLP does not foresee any expansion opportunities beyond year 10, other than those related to normal customer growth. ENGLP does not foresee any issues in obtaining additional gas supplies to facilitate normal customer growth.

Interrogatory 14:

Reference: Exhibit A, Tab 11

Preamble: *"The Ministry of Energy, Northern Development and Mines (MENDM)[10] has delegated to EPCOR the procedural aspects of the Crown's duty to consult for this project."*

Questions:

(a) Please provide an update on communications with MENDM regarding the sufficiency of EPCOR's activities with respect to the duty to consult. When does EPCOR expect to receive and file on the OEB's record a letter from the MENDM regarding the sufficiency of its Indigenous consultation?

Responses:

(a) ENGLP has been in ongoing discussion with MENDM regarding indigenous consultation for the project since submitting its leave to construct application. ENGLP provided an indigenous consultation report to MENDM which was a compilation of all indigenous consultation activities found in the environmental report and leave to construct.

On May 1, 2019, ENGLP received the attached letter regarding the sufficiency of ENGLP's activities with respect to the duty to consult from the MENDM (see Attachment OEB-14-1).

[10] Formerly the Ministry of Energy (MOE)

Ministry of Energy, Northern Development and Mines

77 Grenville Street
6th Floor
Toronto ON M7A 2C1

Tel: (416) 325-6544

Ministère de l'Énergie, du Développement du Nord et des Mines

77, rue Grenville
6e étage
Toronto ON M7A 2C1

Tél: (416) 325-6544

Ontario

Indigenous Energy Policy

VIA EMAIL

May 1, 2019

Zora Crnojacki
Ontario Pipeline Coordinating Committee Chair
PO Box 2319, 2300 Yonge Street
Toronto, Ontario | M4P 1E4

Re: Consultation Sufficiency Opinion for Southern Bruce Natural Gas Project

Dear Ms. Crnojacki,

The Ontario Ministry of the Energy, Northern Development and Mines has completed its review of EPCOR's Indigenous consultation report for the Southern Bruce Natural Gas Project. This letter is to notify you that based on the information provided and through contacting the communities directly, the ministry is of the opinion that the procedural aspects of consultation undertaken by EPCOR to date for the purposes of the Ontario Energy Board's Leave to Construct for the Southern Bruce Natural Gas project is satisfactory.

The ministry understands from discussion with EPCOR and the communities identified for consultation that EPCOR will continue to work with the communities, sharing project information and identifying project benefits, as appropriate.

If you have any questions about this letter or require any additional information, please contact Raina Crasto at 416-326-4571 or raina.crasto@ontario.ca

It is expected that EPCOR will continue its consultation activities with the communities throughout the life of the project, and that EPCOR will notify the Ministry should any additional rights-based concerns/issues arise.

Sincerely,

Shannon McCabe, Manager
Indigenous Energy Policy

c: Kevin Sonnenberg
Andrew Laycock
Ontario Pipeline Coordinating Committee

Interrogatory 15:

Reference: Environmental Report, Appendix E - Archeological Assessment, Figure 5 "Results Overview – Stage 1 Property Inspection Results

Preamble: *"Figure 5 contains "draft" in the title block."*

Questions:

(a) Please confirm whether this is in fact the final version of Figure 5. If not, please file the final version of Figure 5 with a written description of the differences between the draft and final versions.

Responses:

(a) The final version of Figure 5 has been submitted to the Ministry of Tourism, Culture and Sport (MTCS) as part of the updated Stage 1 Archaeological Assessment Report Dated: January 14th, 2019. This report was updated after a field consultation was completed with the Saugeen Ojibway Nation (SON). Figure 5 is also attached to this response (see Attachment OEB-15-1).

The following is a description of the changes made

- Additional areas of previous assessments, extracted from the Ontario Public Register of Archaeological Reports, were added to Figures 5-2, 5-39, 5-41, 5-53, 5-54, and 5-63.
- Areas recommended for deeply buried potential were removed on Figure 5-23, and reduced in size on Figure 5-30.
- Areas recommended for Cemetery Investigation were reduced to only include areas outside the road right of way on Figures 5-10, 5-29, 5-46 and 5-50.

All these changes were implemented based on the recommendations and advice from the SON's archaeologist.

Interrogatory 16:

Reference: Environmental Report, Appendix A, Figure A-2[11]

Preamble: *"Figure A-2 appears to show that the distribution systems within the Southern Bruce Municipalities was included within the study area of the Environmental Report."*

Questions:

(a) Please confirm that the distribution systems within the Southern Bruce Municipalities was included within the study area of the Environmental Report

Responses:

(a) The distributions systems within the Southern Bruce Municipalities were not included within the Study Area of the Environmental Report. The Study Area was established as the area within 500 meters on either side of the mainline and alternative routes. The distribution systems will be constructed pursuant to ENGLP's Certificates of Public Convenience and Necessity, and will comply with the environmental screening criteria as described in *Appendix B The Ontario Energy Board Guidelines for Assessing and Reporting on Natural Gas System in Ontario*[12].

[11] https://www.epcor.com/products-services/infrastructure/Pages/southern-bruce-infrastructure.aspx
[12] *Report to The Ontario Energy Board on The Alternative Dispute Resolution Conference in E.B.O. 188 A Generic Hearing on Natural Gas System Expansion in Ontario*.

Interrogatory 17:

Reference: Exhibit A, Tab 9, Schedule 1, page 1
Exhibit A, Tab 9, Schedule 4, pages 2-3

Preamble: *"EPCOR provided a copy of the Environmental Report to each member of the Ontario Pipeline Coordinating Committee (OPCC) on July 18, 2018. EPCOR received comments from and sent replies to each the Ministry of the Environment, Conservation and Parks (MECP), Ministry of Natural Resources and Forestry (MNRF) and the Technical Standards and Safety Authority (TSSA)."*

Questions:

(a) Has confirmation been received from the MECP that EPCOR's responses regarding landfills are acceptable? Are there any outstanding issues regarding the MECP and landfills?

(b) Has confirmation been received from the MNRF that EPCOR's responses regarding species at risk, aquatic life, etc., are acceptable? Are there any outstanding issues regarding the MNRF and species at risk, aquatic life, etc.?

(c) Has confirmation been received from the TSSA that EPCOR's responses regarding the technical specifications of the pipeline are acceptable? Are there any outstanding issues regarding the TSSA and the technical specifications of the pipeline**?**

(d) Please file an update on the comments (in tabular format) that EPCOR has received as part of the OPCC review since the time the Application was filed. Include the dates of communication, the issues and concerns identified by the parties, as well as EPCOR's responses and actions to address these issues and concerns.

Responses:

(a) On April 30, 2019 ENGLP received an email from the MECP confirming that ENGLPs mitigation measures regarding landfills are acceptable. The email from the MECP is attached. There are no outstanding issues regarding the MECP and landfills. ENGLP will

provide formal notification to the MECP if any adverse conditions are identified during the construction as per the sampling and analysis protocol identified by ENGLP.

(b) On September 20, 2018 ENGLP received a response from Mr. Ken Mott, District Planner, Midhurst District, MNRF, indicating that the MNRF had no further comments at the time based on the information provided to date. There are no outstanding issues regarding the MNRF and species at risk, etc.

(c) On April 30, 2019 ENGLP received a confirmation letter from the TSSA that ENGLP's submitted design criteria meets O. Reg 210\01 and Oil and Gas Pipeline code adoption document, FS-238-18. The letter from the TSSA is attached. There are no outstanding issues regarding the TSSA and the technical specifications of the pipeline. ENGLP will keep the TSSA updated on construction progress and activity and will comply with all audit and quality control requirements of the TSSA.

(d) Table OEB-17-1 summarizes the updated comments that ENGLP has received as part of the OPCC review since the time this Application was filed. The table includes the dates of communication, the issues and concerns identified by the parties, as well as ENGLP's responses and actions to address these issues and concerns.

Table OEB 17-1: OPCC Members Updated Comments

Comment Number	Report Section	Comment and ENGLP Response
Comments Provided By: Ministry of Natural Resources and Forestry (MNRF) ***Source: Letter dated September 13, 2018 ("By Email Only")***		
MNRF_1	4.5 Summary of Recommendations, Table 4-7: Species at Risk (SAR) AND 4.3.1 Aquatic Species and Habitat, Aquatic Species at Risk	***Comment:*** *Species at Risk: the list of potential species provided is very thorough. SAR have been addressed at a broad scale as it would appear that no surveys or field work have occurred along the proposed route to date.* *MNRF feels the proposed mitigation for SAR is adequate but recommends the following additions listed below to avoid any impacts to threatened and endangered species or their habitat;* • *SAR Bats – table 4-7 Mitigation for Tree Removal. This mitigation should be adjusted to reflect the active season for bats which is generally April 1 to October 31. In areas observed to have bats, no tree removal should occur during this time.* • *Rainbow Mussel – provincial status has changed to Special Concern as of June 2017. However, it is still "Endangered" under the federal Species at Risk Act.*
		Response, Applicable Mitigation and/or Commitment: Comment noted. EPCOR will follow mitigation measures to prevent tree removal during the active season for bats (April 1 – October 31). If bats are observed in the area where trees are to be removed, work will be delayed until after October 31 and before April 1. EPCOR will follow mitigation measures for the Rainbow Mussel appropriate for the provincial status and federal status requirements. These mitigation measures will be added to the Project specific Environmental Protection Plan.
MNRF_2	4.3.4 Species at Risk (SAR), Mitigation and Protective Measures	***Comment:*** *Reptiles and Amphibians: the mitigation section recommends that work is to occur outside the breeding season. If this is not possible, then the area should be surveyed prior to starting any work to ensure that no species are present. Should any turtles be found in the area, exclusion fencing should be installed to ensure they do not enter the area during the period of work.*
		Response, Applicable Mitigation and/or Commitment: Comment noted. If work is required to be conducted during the reptile and amphibians breeding season, the area will be surveyed prior to starting work to ensure that no species are present. If turtles are found in the area, exclusion fencing will be installed to ensure they do not enter the area during the period of work. This mitigation measure will be added to the Project specific Environmental Protection Plan.

Comment Number	Report Section	Comment and ENGLP Response
MNRF_3	4.3.1 Aquatic Species and Habitat, General Mitigation Measures	***Comment:*** *Fisheries: the report references timing windows that are not appropriate for Grey or Bruce counties. These timing windows should be changed to:* • *Coldwater timing window – work allowed July 1 to September 30* • *Warmwater timing window – work allowed July 15 to March 15* • *Coolwater/migratory timing window – work allowed July 15 to September 30* *Additionally, the report identifies the South Pine River as being a warmwater system. It does, however, have a migratory run of salmonids and as such should be considered Coolwater/migratory with the appropriate timing windows applied.*
		Response, Applicable Mitigation and/or Commitment: Comment noted. The timing windows provided by the MNRF for Grey and Bruce counties will be followed, as listed above. This mitigation measure will be added to the Project specific Environmental Protection Plan.
Comments Provided By: Ministry of Natural Resources and Forestry (MNRF) **Source:** ***Email Response to emailed letter dated September 20, 2018 ("OPCC – MECP, MNRF, HSM Comment Response")***		
MNRF_4	N/A	***Comment:*** *MNRF has no further comments at this time based on the information provided to date.*
		Response, Applicable Mitigation and/or Commitment: No further response, applicable mitigation and/or commitment required.

Comments Provided By: Ministry of the Environment, Conservation and Parks (MECP) ***Source: Email dated August 23, 2018***		
MECP_1	3.0 Consultation Program, Agency Input AND 4.4.6 Contaminated Sites	***Comment:*** *Section 3.5.2.2 suggests that no additional mitigation or protective measures from ministry consultation were incorporated. However, waste sites are further described in Section 4.4.6 The Mitigation and Protective measures described on page 4.67 speak to soil and water contamination mainly from construction, but do not appear to directly address closed and/or active landfill sites. Measures for landfill sites including leachate or methane contaminate should be identified. Alternatively, if it is determined that the waste sites pose no concern to the project, the methodology for this determination should be included. Please note that MECP did not verify the identified landfill or contaminated site locations in Figure C-2.* **Response, Applicable Mitigation and/or Commitment:** Data for closed and active landfill sites were sourced using mapping from the Bruce County Official Plan and Ontario landfill location points from the Waste Disposal Site Inventory provided by Ministry of Environment and Climate Change (now Ministry of Environment Conservation and Parks) in June 1991. Based on these two datasets, the lateral distance between the closest landfill site and the location of the preferred pipeline route, near the Town of Ripley, Ontario was determined to be 60m. Distance to the next closest landfill site to the preferred pipeline route is greater than 325 m. Based on the above stated separation distances between the landfill sites to the location of the pipeline route, it is our opinion that any potentially contaminating activities from surrounding landfills will not create and environmental concern to the Project. If construction of a pipeline route was to traverse through a landfill in a hypothetical worst case scenario, then there could be possible corrosion to the pipeline itself (salt from landfill leachate) and/or explosion from combustion of accumulated landfill methane gas when cutting steel pipe, or by workers smoking in the work area. In the Town of Ripley where the preferred pipeline route is at its closest to a landfill site (approximately 60m), adherence to EPCOR health and safety requirements would require all workers to wear protective rubber boots, should these workers be exposed to water accumulated at the bottom of a trench; thus protecting workers from any possible dermal exposure to landfill leachate. Adherence to EPCOR health and safety requirements will also eliminate any dangers from any potential methane exposure. These include: 1. Daily use of hand-held gas monitors to detect concentration levels and explosive levels of combustible gases including methane gas 2. No smoking is allowed within the work area. Dedicated smoking areas will be set up in Safe Zones. 3. Restriction on any use of welding on the project. The pipeline specified for this project in the Town of Ripley is medium density polyethylene pipe and therefore no welding will be occurring. These mitigation measures will be added to the Project specific Environmental Protection Plan.

Comments Provided By: Ministry of the Environment, Conservation and Parks (MECP) ***Source: Response to emailed 'South Bruce Natural Gas Landfill Impact Assessment', dated December 12, 2018 received April 30, 2019***		
MECP_2	N/A	***Comment:*** *The Ministry of Environment, Conservation and Parks Southwestern Region have reviewed the package submitted by Stantec Consulting Ltd. regarding the EPCOR Natural Gas Line proposed for South Bruce County, as dated December 12, 2018. The report prepared by Stantec is through and comprehensive. It is to be noted only 2 of the 9 landfills found within 500 m of the proposed pipeline were active and of the 7 closed landfill sites they have been closed for at minimum 40 years and at maximum 74 years. Information provided on all 9 landfills gave the level of detail needed to adequately assess the impact potential of landfill generated leachate and methane gas.* *This ministry's Southwestern Region concurs with the conclusions of the report that there is low probability of the pipeline trenching encountering landfill leachate or landfill gas. This ministry's Southwestern Region commends Stantec for proposing the groundwater sampling and analysis program as an added level of security should groundwater be encountered in any excavation. This ministry's Southwestern Region offers the same comment for the planned onsite methane monitoring. This ministry's Southwestern Region would, however, suggest that review of any analytical data also give due consideration towards other non-landfill potential sources should elevated concentrations result.* *The mitigating measure of installing bentonite trench plugs is anticipated to address any potential for the pipeline trench to act as a conduit for fugitive contaminants from any source.* *Should the unexpected occur and the presence of landfill leachate and or gas be confirmed in a pipeline trench this would be a finding of considerable significance given that landfill by-products migrating off an approved waste disposal site at elevated concentrations is in contravention of the EPA Part V Regulation 347. As such, EPCOR/Stantec must provide formal notification to the MECP Owen Sound District Office of such an instance at the earliest opportunity possible, should one occur.* **Response, Applicable Mitigation and/or Commitment:** No further response, applicable mitigation and/or commitment required.
Comments Provided By: Historic Saugeen Metis (HSM) ***Source: Email dated August 15, 2018 and Email dated August 28, 2018***		
HSM_1	N/A	**Comment** *In our e-mail to you dated August 15, 2018, we were careful to point out the following clarification: "Environmental Report (July 16, 2018) - Clarifications noted – HSM is referenced below as MNO and/ or Métis Nation. HSM is an*

		independent historic Métis Community and is not affiliated with the Métis Nation of Ontario. The correct term is Métis or Métis community when HSM is referenced with other Métis communities." The potential for confusion occurs when "Metis Nation" is used for readers or audiences in Ontario because it is often assumed that it means "Metis Nation of Ontario" or (MNO). Therefore, the term "Metis Nation" would not include Historic Saugeen Metis as we are not a member of the Metis Nation of Ontario. The safest expression would be to use Historic Saugeen Metis with the acronym HSM.
		Response, Applicable Mitigation and/or Commitment: The Historic Saugeen Metis (HSM) will be referred to as a "Metis Community" and the acronym HSM will be used in future correspondence and documentation.
Comments Provided By: Technical Standards and Safety Authority (TSSA) ***Source: Emailed letter dated April 30, 2019***		
TSSA_1	N/A	***Comment:*** *[The TSSA] reviewed the submitted Design and Pipe specifications and Pipeline Hazard Analysis and High Consequence Area analysis related to this project. Submitted design criteria meets O. Reg. 210/01 and Oil and Gas Pipeline code adoption document, FS-238-18. We will visit this site as part of our audit and witnessing the pressure tests.*
		Response, Applicable Mitigation and/or Commitment: No further response, applicable mitigation and/or commitment required.
Comments Provided By: Ministry of Culture, Tourism & Sports ***Source: Email dated May 1, 2019***		
MTCS_1	N/A	***Comment:*** *Your request for an expedited review of report number 47502 submitted under Project Information Form P392-0189-2016 on Apr 24, 2019 has been granted. We expect that the review of this report will be completed by May 29, 2019. We have noted the requested review date, and if possible we will attempt to complete the review by this date.* *Thank you for your expedited review request. This request has been granted but, depending on the volume of requests, it may take a minimum of 20 business days from the time the ministry grants the request for an expedited review to be completed.* *If you have any questions please use PastPort's 'Ask a question' feature in the Report module or send an e-mail to Archaeology@ontario.ca. Please do not reply directly to this e-mail.*
		Response, Applicable Mitigation and/or Commitment: No further response, applicable mitigation and/or commitment required.

345 Carlingview Drive
Toronto, Ontario M9W 6N9
Tel.: 416.734.3300
Fax: 416.231.1626
Toll Free: 1.877.682.8772

www.tssa.org

April 30, 2019

Mr. Kevin Sonnenberg
EPCOR Natural Gas Limited Partnership
10423-101 St. NW, unit 2000
Edmonton, AB, T5H 0E8

SR# 2363498

Re: Southern Bruce Natural Gas Pipeline Project

Dear Mr. Kevin Sonnenberg,

This is in response to your submitted EPCOR Pipeline Project application dated August 02, 2018 about the Southern Bruce Natural Gas Pipeline Project to service the Southern Bruce, Ontario. The project is to install 75 km of Nominal Pipe Size (NPS) 8 to 6-inch steel high pressure (HP) pipe and approximately 52 km of NPS 6-inch high density polyethylene (HDPE) pipe (the Project). This pipeline will be the backbone for service to multiple communities throughout Southern Bruce. Through a combined 165 km of distribution piping, natural gas service will be provided to a maximized number of customer connections including residential, commercial, agricultural and industrial customers.

I reviewed the submitted Design and Pipe specification and Pipeline Hazard Analysis and High Consequence Area analysis related to this project. Submitted design criteria meets O.Reg. 210\01 and Oil and Gas Pipeline code adoption document, FS-238-18. We will visit this site as part of our audit and witnessing the pressure tests.

Should you have any questions, please contact me at 416.734.3539 or by e-mail at kmanouchehri@tssa.org. When contacting TSSA regarding this file, please refer to the Service Request number provided above.

Yours truly,

Kourosh Manouchehri, P.Eng.,
Fuels Safety Engineer
Tel.: (416) 734-3539
Fax: (416) 231-7525

c. Ms. Zora Crnojacki
Chairperson, OPCC
Ontario Energy Board

From:	Newton, Craig (MECP)
To:	Litwinow, Ryan
Cc:	zora.crnojacki@ontarioenergyboard.ca; Rooly.Georgopoulos@stantec.com; Emily.Hartwig@stantec.com; Lafrance, Crystal (MECP); Chappell, Rick (MECP); Sonnenberg, Kevin; Thomas, Simon; Zumbado, Andres; Harman, Bruce (MECP); Eckert, Anneleis (MECP)
Subject:	FW: OPCC - MECP, MNRF, HSM Comment Response
Date:	Tuesday, April 30, 2019 7:30:02 AM
Attachments:	image001.png RE OPCC - MECP MNRF HSM Comment Response.msg

Dear Mr. Litwinow:

Thank you for your voice mail message and immediately preceding e-mail of yesterday, April 29th, 2019. This e-mail also acknowledges this ministry's receipt of your December 12th, 2018 e-mail and accompanying attachments.

In response, the Ministry of Environment, Conservation and Parks Southwestern Region have reviewed the package submitted by Stantec Consulting Ltd. regarding the EPCOR Natural Gas Line proposed for South Bruce County, as dated December 12, 2018. The report prepared by Stantec is thorough and comprehensive. It is to be noted only 2 of the 9 landfills found within 500 m of the proposed pipeline were active and of the 7 closed landfill sites they have been closed for at minimum 40 years and at maximum 74 years. Information provided on all 9 landfills gave the level of detail needed to adequately assess the impact potential of landfill generated leachate and methane gas.

This ministry's Southwestern Region concurs with the conclusions of the report that there is low probability of the pipeline trenching encountering landfill leachate or landfill gas. This ministry's Southwestern Region commends Stantec for proposing the groundwater sampling and analysis program as an added level of security should groundwater be encountered in any excavation. This ministry's Southwestern Region offers the same comment for the planned onsite methane monitoring. This ministry's Southwestern Region would, however, suggest that review of any analytical data also give due consideration towards other non-landfill potential sources should elevated concentrations result.

The mitigating measure of installing bentonite trench plugs is anticipated to address any potential for the pipeline trench to act as a conduit for fugitive contaminants from any source.

Should the unexpected occur and the presence of landfill leachate and or gas be confirmed in a pipeline trench this would be a finding of considerable significance given that landfill by-products migrating off an approved waste disposal site at elevated concentrations is in contravention of the EPA Part V Regulation 347. As such, EPCOR/Stantec must provide formal notification to the MECP Owen Sound

District Office of such an instance at the earliest opportunity possible, should one occur.

If you have any concerns or questions please do not hesitate to contact me.

Yours truly,

Craig Newton
Regional Environmental Planner / Regional EA Coordinator
Ministry of the Environment, Conservation and Parks
Southwestern Region
733 Exeter Road
London, Ontario
N6E 1L3

Telephone: (519) 873-5014
E-mail: craig.newton@ontario.ca

From: Litwinow, Ryan <RLitwinow@epcor.com>
Sent: April-29-19 1:34 PM
To: Newton, Craig (MECP) <Craig.Newton@ontario.ca>
Cc: Lafrance, Crystal (MECP) <Crystal.Lafrance@ontario.ca>; Eckert, Anneleis (MMAH) <Anneleis.Eckert@ontario.ca>; Zumbado, Andres <AZumbado@epcor.com>
Subject: RE: OPCC - MECP, MNRF, HSM Comment Response

Craig,

Good afternoon. I have missed you the past few days and have left a few voice messages at the phone number Anneleis provided last week. I wanted to follow up to see if you had a chance to review the information EPCOR has provided regarding the assessment of the landfills within 3km of the PPR and the monitoring and mitigation measures captured in the Southern Bruce Natural Gas Landfill Assessment (attached).

Please do not hesitate to call if any additional information or background is required.

Thank you
Ryan

Ryan Litwinow
Senior Manager, Industrial and Major Projects
EPCOR Project & Technical Services
P: 780-412-7893
C: 587-986-0959
rlitwinow@epcor.com

PROVIDING MORE EPCOR

From: Litwinow, Ryan <RLitwinow@epcor.com>
Sent: Thursday, April 25, 2019 9:08 AM
To: Eckert, Anneleis (MMAH) <Anneleis.Eckert@ontario.ca>
Cc: Newton, Craig (MECP) <Craig.Newton@ontario.ca>; Lafrance, Crystal (MECP) <Crystal.Lafrance@ontario.ca>
Subject: Re: OPCC - MECP, MNRF, HSM Comment Response

Anneleis,

Thank you. I will follow up with Craig today.

Thank you
Ryan

Sent from my iPhone

On Apr 25, 2019, at 8:56 AM, Eckert, Anneleis (MMAH) <Anneleis.Eckert@ontario.ca> wrote:

> Notice: External Email
> Use caution when opening links, attachments, and when prompted to enter User IDs, Passwords or Confidential Information.
> Please report any suspicious email to the EPCOR Service Desk.
>
> Hello Ryan,
> Thank you for following up. I am currently on assignment to another ministry. Craig Newton will be better able to respond to your enquiry. I have cc'd him on this email. He can also be reached at craig.newton@ontario.ca or 519-873-5014.
> Thank you,
>
> Anneleis Eckert, Planner
> Municipal Services Office – West
> Municipal Services Division
> Ministry of Municipal Affairs and Housing
> 659 Exeter Road 2nd Floor
> London ON N6E 1L3
> anneleis.eckert@ontario.ca | 519-873-4768

From: Litwinow, Ryan <RLitwinow@epcor.com>
Sent: April 25, 2019 10:49 AM
To: Eckert, Anneleis (MMAH) <Anneleis.Eckert@ontario.ca>
Cc: zora.crnojacki@ontarioenergyboard.ca; Rooly.Georgopoulos@stantec.com; Emily.Hartwig@stantec.com; Lafrance, Crystal (MECP) <Crystal.Lafrance@ontario.ca>; Chappell, Rick (MECP) <Rick.Chappell@ontario.ca>; Sonnenberg, Kevin <KSonnenberg@epcor.com>; Thomas, Simon <sthomas@epcor.com>; Zumbado, Andres <AZumbado@epcor.com>
Subject: RE: OPCC - MECP, MNRF, HSM Comment Response

Anneleis,

Good morning. Further to our correspondence in 2018 I would like to following up to see if you had any further questions or comments on EPCOR's assessment of the landfills within 3km of the PPR and the monitoring and mitigation measures captured in the Southern Bruce Natural Gas Landfill Assessment (attached)?

Please do not hesitate to call if any additional information is required.

Thank you
Ryan

Ryan Litwinow
Senior Manager, Industrial and Major Projects
EPCOR Project & Technical Services
P: 780-412-7893
C: 587-986-0959
rlitwinow@epcor.com
<image001.png>

From: Litwinow, Ryan
Sent: Wednesday, December 12, 2018 4:43 PM
To: Anneleis.Eckert@ontario.ca
Cc: zora.crnojacki@ontarioenergyboard.ca; Rooly.Georgopoulos@stantec.com; Emily.Hartwig@stantec.com; Crystal.Lafrance@ontario.ca; Rick.Chappell@ontario.ca; Sonnenberg, Kevin <KSonnenberg@epcor.com>; Thomas, Simon <sthomas@epcor.com>; Zumbado, Andres <AZumbado@epcor.com>
Subject: RE: OPCC - MECP, MNRF, HSM Comment Response

Anneleis,

Good afternoon. Since her last correspondence in October, Audrey Cudrak has transferred to a new positon within EPCOR. I had worked closely with Audrey to address the questions you presented in August and I will be the primary contact if any additional questions come up.

Please find attached the South Bruce Natural Gas Landfill Impact Assessment. We have completed an assessment of the landfills within 3km of the proposed pipeline route (PPR) in response to your email dated August 23, 2018 and subsequent correspondence. The assessment identifies all landfills within 3km of the PPR and the methodology to confirm if the landfills present a probability of interaction with the PPR. The conclusions are supported by the identification of physical barriers between the landfill sites and the PPR as well as other environmental features. Where probability of interaction could not be eliminated, additional monitoring and mitigation measures have been identified and are included in the report.

We believe the concerns raised by the MECP have been fully addressed, including additional monitoring and mitigation measures and are captured within the assessment. Please advise if any further action or additional follow-up is required.

Regards,

Ryan

Ryan Litwinow
Senior Manager, Industrial and Major Projects
EPCOR Project & Technical Services
P: 780-412-7893
C: 587-986-0959
rlitwinow@epcor.com
<image001.png>

From: Cudrak, Audrey
Sent: October-03-18 2:23 PM
To: Anneleis.Eckert@ontario.ca
Cc: zora.crnojacki@ontarioenergyboard.ca; Rooly.Georgopoulos@stantec.com; Emily.Hartwig@stantec.com; Crystal.Lafrance@ontario.ca; Rick.Chappell@ontario.ca; Sonnenberg, Kevin; Litwinow, Ryan
Subject: RE: OPCC - MECP, MNRF, HSM Comment Response

Good afternoon Anneleis – thank you for your voice mail from this morning, it was very helpful. As per your message, here are the mitigation measures we are proposing should we encounter landfill leachate or methane during the open trench excavation and installation of this pipeline:

1. With regards to the potential of encountering landfill leachate introduced into the excavation trenches, locations of all active and landfill sites within 500m of the pipeline route have been mapped in the ER and more detailed maps are under development. Landfill leachate is characteristic of elevated levels of electrical conductivity (EC) and total dissolved solids (TDS) as general landfill leachate indicator parameters in groundwater. For mapped areas along the pipeline route that intersect with this 500m buffer and where groundwater is encountered at the base of the excavation trench, that groundwater will be field

tested for leachate pollutant indicator parameters EC and TDS using a hand-held meter (e.g. YSI 556, Hach TSS Meter, or other equivalent model units) and those values will be compared to EC values of background areas outside the 500m buffer. For groundwater in those locations where presence of landfill leachate is confirmed, those areas will be identified on a map as requiring measures to be taken so as to prevent the pipeline trench from behaving as a conduit for landfill leachate. Those measures include the installation of bentonite trench plugs every 100m, until the construction exits the intersected 500m zone. Bentonite is an impermeable material that upon interaction with water will swell forming an impermeable seal, thus eliminating any potential pathway along the route of the pipeline.

2. With respect to the potential of encountering landfill methane gas build up within the open trench, Section D-4-1 of the Guidelines states: "methane cannot cause an explosion unless it accumulates to a concentration above its lower explosive limit in an enclosed space where it can be ignited" During the construction, it is expected that all subsurface gases will be exposed and dissipated into the atmosphere once the trench is opened. The trench will be backfilled shortly after the pipe is installed therefore we do not anticipate any conditions that would encourage accumulation of gases. However we will have hand-held gas meters at every crew location and will ensure the atmosphere in the trench is safe prior to any person entering the trench. Should we encounter the presence of methane, similar measures as described above will be implemented to eliminate any potential pathway along the pipeline.

I will call you tomorrow to confirm that these mitigation measures meet your requirements. I can also give you a quick update on our plans for further assessment of the landfills within 500m of the project based on the advice you provided. I will be able to follow up in writing with the specific details once I have them from our environmental consultant.

Thank you,

Audrey

Audrey A. Cudrak, M.Eng., P.Eng.
Director, Project & Technical Services
EPCOR Commercial Services
2000 – 10423 101 Street NW
Edmonton, AB
Canada
T5H 0E8
T: (780) 412-7970
F: (780) 412-3013
E: acudrak@epcor.com

From: Cudrak, Audrey
Sent: October-01-18 8:53 AM
To: 'Anneleis.Eckert@ontario.ca'
Cc: zora.crnojacki@ontarioenergyboard.ca; 'Rooly.Georgopoulos@stantec.com'; 'Emily.Hartwig@stantec.com'; 'Crystal.Lafrance@ontario.ca'; 'Rick.Chappell@ontario.ca'; Sonnenberg, Kevin; Litwinow, Ryan
Subject: OPCC - MECP, MNRF, HSM Comment Response

Good morning Anneleis, thank you for the comments and concerns in your email of September 21st. All of these concerns are valid and we are seeking to address them. We have some thoughts regarding assessment of potential impact from the landfills in the ER study area, but we were hoping to have a discussion with you to better clarify your requirements and obtain your guidance on next steps. We also have determined appropriate precautionary and mitigation measures to minimize/avoid the effects of potential landfill methane and leachate that may or may not be encountered during the open trench excavation and installation of this pipeline. These can also be discussed on the call if you wish.

Can you please let me know of a few time slots (maybe one hour?) when you are available this week? We would like to include our environmental consultant (Stantec) as well.

Many thanks and I look forward to hearing from you.

Audrey

Audrey A. Cudrak, M.Eng., P.Eng.
Director, Project & Technical Services
EPCOR Commercial Services
2000 – 10423 101 Street NW
Edmonton, AB
Canada
T5H 0E8
T: (780) 412-7970
F: (780) 412-3013
E: acudrak@epcor.com

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by reply email and delete this email message, including any attachments. Thank you.

Interrogatory 18:

Reference: Exhibit A, Tab 9, Schedule 1, page 2
Preamble: *"EPCOR will develop an Environmental Protection Plan (EPP) which will include the mitigation measures identified in the Environmental Report including future revisions. The EPP will provide site specific mitigation programs to be implemented during the construction of the Project."*

Questions:

(a) Please provide an update on the EPP including the date by which it is anticipated to be fully completed. If a draft or the final plan is now available, please file the draft into evidence.

Responses:

(a) A draft of the EPP can be found in Appendix OEB-18-1. The final version (including appendices) is expected to be completed by June 30th 2019.

Natural Gas Pipeline to Serve Southern Bruce: Environmental Protection Plan

DRAFT REPORT

April 15, 2019

File: 160951105

Prepared for:

EPCOR Natural Gas Limited Partnership
39 Beech Street East
Aylmer, ON N5H 3J6

Prepared by:

Stantec Consulting Ltd.
300W-675 Cochrane Drive
Markham, ON L3R 0B8

Sign-off Sheet

This document entitled Natural Gas Pipeline to Serve Southern Bruce: Environmental Protection Plan was prepared by Stantec Consulting Ltd. (“Stantec”) for the account of EPCOR Gas Distribution Inc. (the “Client”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____
(signature)

Chris Revak, B.Sc.
Environmental Scientist

Reviewed by _____
(signature)

Rob Rowland, M.Sc., P.Geo.
Associate

Approved by _____
(signature)

Mark Knight, M.A., MCIP, RPP
Environmental Planner

pk \\cd1215-f01\work_group\01609\active\160951129\05_report_deliv\deliverable\epp\rpt_160951105_epp_epcor_20190415_dft.docx

Table of Contents

LIST OF FIGURES

LIST OF APPENDICES

Abbreviations

AA	Archaeological Assessment
CHAR	Cultural Heritage Assessment Report
cm	centimetre
DFO	Fisheries and Oceans Canada
EASR	Environmental Activity and Sector Registry
EPCOR	EPCOR Natural Gas Limited Partnership
EPP	Environmental Protection Plan
ER	Environmental Report
ESA 2007	*Endangered Species Act, 2007*
ESC	erosion and sediment control
HDD	horizontal directional drilling
HDPE	high density polyethylene
HP	high pressure
Hydro One	Hydro One Networks Inc.
km	kilometre
LTC	Leave to Construct
m	metre
MBCA	*Migratory Bird Convention Act, 1994*
MECP	Ministry of the Environment, Conservation and Parks
MNRF	Ministry of Natural Resources and Forestry
MTCS	Ministry of Tourism, Culture and Sport

MVCA	Maitland Valley Conservation Authority
NPA	*Navigation Protection Act*
NPS	Nominal Pipe Size
OEB	Ontario Energy Board
OEB Environmental Guidelines (2016)	Ontario Energy Board's Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)
OHA	Ontario Heritage Act
PSW	Provincially Significant Wetland
PTTW	Permit to Take Water
ROW	right-of-way
SAR	species at risk
SCN	soybean cyst nematode
Stantec	Stantec Consulting Ltd.
SVCA	Saugeen Valley Conservation Authority
TC	Transport Canada
TLU	traditional land use
TWE	temporary work easement

1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec), on behalf of EPCOR Natural Gas Limited Partnership (EPCOR) has developed this Environmental Protection Plan (EPP) for the installation of a natural gas pipeline in Southern Bruce and Grey County, Ontario, the “Project”.

This EPP outlines the required environmental protection measures and commitments to avoid and/or reduce the potential for construction to result in adverse effects upon the environment. These measures shall be carried out by EPCOR, their contractor and sub-contractors during construction (pre-construction, construction and post-construction) of the Project.

1.1 PROJECT SUMMARY

EPCOR has received a Leave to Construct (LTC) from the Ontario Energy Board (OEB) to construct a 75 km of Nominal Pipe Size (NPS) 8 to 6-inch steel high pressure (HP) pipe and approximately 52 km of NPS 6-inch high density polyethylene (HDPE) pipe (the Project natural gas pipeline in Southern Bruce and Grey Counties, Ontario.

The pipeline will originate from the Enbridge Dornoch Meter and Regulator Station in the Township of Chatsworth and terminate in the community of Lucknow in the Township of Huron-Kinloss. The pipeline will initially run west to service the communities of Chesley and Paisley and continue west to the Bruce Energy Centre. The pipeline will then travel south servicing the communities of Tiverton, Inverhuron, Kincardine, Lurgan Beach and Point Clark. Finally, the pipeline will then travel east, inland along Concession 4 to service the community of Ripley and terminate in the community of Lucknow .

The pipeline will be located within existing road allowances along the route (see Figure 1). A 5 metre (m) wide temporary working easement (TWE) is required along portions of the proposed route to accommodate construction activities.

1.2 PROJECT SCHEDULE

Pending the acquisition of approvals and permits, construction is expected to commence in Quarter 2 of 2019 and is anticipated to be completed in sections through 2019 to 2021. It is estimated to take approximately three years to complete.

Stantec

EPCOR

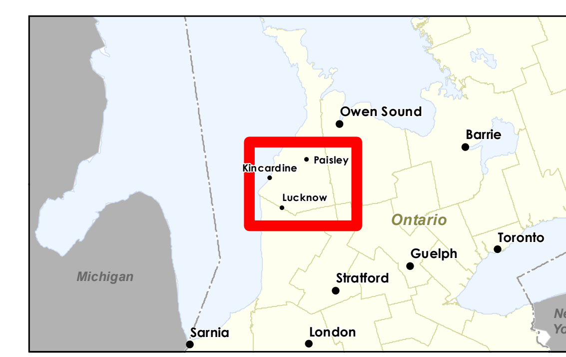
Legend

- Stage 1: 2019 Construction
- Stage 2: 2020 Construction
- Stage 3: 2021 Construction
- Expressway / Highway
- Major Road
- -UG- Union Gas Pipeline (Approximately)
- Watercourse
- Municipal Boundary - Lower Tier
- MECP Boundary
- Waterbody

0 5 10 Kilometers

1:275,000 (At original document size of 11x17)

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2019.



Project Location 160951105
Counties Of Bruce, Grey and Huron
Prepared by SPE on 2019-03-21
Technical Review by BCC on 2019-02-28

Client/Project
EPCOR NATURAL GAS LIMITED PARTNERSHIP (ENGLP)
NATURAL GAS SERVICE SOUTHERN BRUCE

Figure No. DRAFT
1

Title
Location Map

1.3 BACKGROUND AND METHODOLOGY

This EPP includes both general and site-specific environmental protection measures which have been developed based on past project experience and current industry best management practices and consistency with the OEB Environmental Guidelines (2016): *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario*, 7th Edition (2016). Specifically, the EPP:

- Outlines environmental protection measures related to Project activities.
- Provides instructions for carrying out construction activities to minimize environmental effects.
- Serves as reference information for the EPCOR Inspection Team to support decision making and provide links to more detailed information.

The EPP is written in construction specification format and should be read in conjunction with the Environmental Alignment Sheets (Appendix A). This EPP provides Project-related environmental mitigation measures and commitments to be addressed during the construction and post-construction reclamation phases. The EPP is based on information gathered through a combination of desktop review, field work and permitting documentation, including:

1. Proposed Natural Gas Pipeline to Serve Southern Bruce: Environmental Report (ER; Stantec 2018).
2. Professional experience.

1.4 PROJECT DESCRIPTION

The pipeline construction process includes various activities as described below.

1. **Site Preparation:** The first crew to enter the construction site is typically the survey and staking crew who delineate the boundaries of the road allowance and temporary work areas. Safety fence is installed at the edge of the construction road allowance where public safety considerations are required, and aspects of the traffic management plan are implemented (i.e., signs and vehicle access). Alternative access to sidewalks and trails are established, where necessary.
2. **Clearing:** The clearing crew clears brush and other vegetation within the road allowance and temporary work areas to permit construction of the pipeline.
3. **Grading and Stripping:** The grading crew prepares the road allowance for access by construction equipment. At this stage, the topsoil (on agricultural lands) or the duff layer (on natural lands) is stripped by bulldozers and graders then segregated so it will not be mixed with the subsoil later removed from the trench. Existing landscaping is removed, and dewatering undertaken, where necessary.

4. **Trenching:** Once the road allowance has been graded, a hydraulic hoe will excavate the trench for the installation of the new pipeline. Laneways and trails are left over the trench as long as feasible where requested by the landowner.

5. **Stringing:** The stringing crew lays pipe on wooden skids adjacent to the trench area.

6. **Pipe Fabrication and Lowering:** The pipe is bent as required and the welding crew welds the pipe into continuous lengths. The pipe welds are subjected to non-destructive testing and coated then inspected before the pipeline is lowered into the trench. Crews also install pipes under obstacles such as roads or watercourses by horizontal directional drilling (HDD). The welds are documented with global positioning system locations identified on the weld map along with the identification of each pipe section for future identification.

7. **Backfilling:** The backfilling crew backfills the originally excavated subsoil over the pipe in the trench. In shallow water table areas, the pipeline may be weighted to provide negative buoyancy. The trench line will be crowned to allow for soil settlement. Surplus backfill material will be removed from the road allowance.

8. **Pressure Testing:** The pipeline is then pressure tested hydraulically or pneumatically. If tested hydrostatically, water may be drawn from a suitable local source based on discussions with the appropriate authorities and will be disposed of appropriately (e.g., discharged to land or sanitary sewer, or removed by an approved waste disposal provider). Upon completion of hydrostatic testing, the pipeline is dried, purged of air and filled with natural gas.

9. **Clean-Up and Restoration**: The clean-up crew is responsible for the restoration of the road allowance and temporary work areas. In natural areas, the restoration includes re-seeding of the right-of-way (ROW) and restoring ditch banks, watercourse crossings and wetland areas, and removing erosion and sediment controls. In developed areas the clean-up crew undertakes landscaping plans developed for site restoration.

2.0 SCOPE OF ENVIRONMETAL PROTECTION PLAN

This EPP addresses the construction mitigation and reclamation of the Project and applies to the ROW, TWE, permanent or temporary access roads, staging areas, construction yards and pipe storage areas.

2.1 ORGANIZATION

The EPP is intended to provide an understanding of the general environmental setting of the Project; outline the extent and limitations of the EPP; document site-specific environmental protection measures of the Project identified during field survey and permitting; and provide general environmental protection measures or best management practices that are typically applied to pipeline projects. Environmental protection measures are identified in accordance with the progression of construction activities and are intended to be read in conjunction with the Environmental Alignment Sheets (Appendix A) and construction drawings. The Environmental Alignment Sheets identifies specific locations where environmental protection measures will be applied. The following outlines what is included in this EPP:

- **Sections 1-2** “Introduction and Scope of the Environmental Protection Plan”, outlines the general project description, scope of the EPP, and where information can be found in the EPP.
- **Section 3** “Environmental Compliance”, provides information about the tools and processes to facilitate compliance with regulatory approvals, permits, commitments and the requirements of the EPP. Section 3 also provides details on activities to be followed so that relevant stakeholders are notified of Project activities before the commencement of construction and the resolution mechanisms to address issues, non-compliances or revised construction requirements.
- **Section 4** “Preconstruction Measures”, outlines activities to complete the appropriate studies prior to commencing construction, review permits, identify other potential constraints (e.g., hot lines) and updating the EPP.
- **Section 5** “Resource-Specific Protection and Management Measures”, outlines procedures to be undertaken to protect site-specific environmental and cultural features (Section 2.2) that were identified pursuant to the ER for the Project (Stantec 2018). This information is documented and displayed on the Environmental Alignment Sheets (Appendix A). This section also includes the Erosion and Sediment Control (ESC) Plan for the Project and mitigation measures for “Found Resources” identified during construction.
- **Section 6** “General Environmental Protection Measures”, outlines general environmental protection measures required during construction of the Project.
- **Section 7** “Construction Mitigation Measures” outlines the environmental protection measures associated with vegetation clearing, topsoil handling and grading, pipe installation, watercourse and wetland crossings, backfilling, hydrostatic testing, clean-up and restoration.

- **Section 8** “References” outlines the references and permit documents accessed to complete the EPP.

Appendices to the EPP include the Environmental Alignment Sheets, typical drawings and Toronto Region Conservation Authority HDD Guidelines (TRCA, 2010).

2.2 SITE-SPECIFIC ENVIRONMENTAL AND CULTURAL FEATURES

Non-routine environmental protection measures that require site and species- specific mitigation have been developed for areas and species which require special attention regarding the protection of environmental resources including:

- Sensitive wetlands and watercourses
- Turtle nesting areas
- Bat maternal colony habitat
- Snake nesting areas
- Special conditions in CA permits
- Historical resource buildings
- Mitigation associated with vegetation clearing in potential bird nesting areas

2.3 SOURCES

Industry guidelines and regulations have been considered in the creation of the EPP include:

- OEB, Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 7th Edition (2016)
- Ministry of Environment, Conservation and Parks (MECP) Waste Management Regulations (O. Reg 347)
- Authorization under the *Fisheries Act*, 1985. Following determination of final crossing methods, a fish habitat impact screening (self-assessment) should be completed to determine if Department of Fisheries and Oceans (DFO) review/authorization will be required.
- Clearing of Vegetation under the *Migratory Bird Convention Act*, 1994 (MBCA)
- Review and Authorization under the *Navigation Protection Act*, 1985 (NPA)
- Encroachment Permit from Grey County
- Archaeological clearance under the *Ontario Heritage Act* (OHA)

- Review of Built Heritage and Cultural Landscape under the OHA
- Encroachment Permit under the *Highways Act*
- Tree Removal Permit from the Township of Huron-Kinloss
- Road Use Agreement from the Township of Huron-Kinloss
- Bruce County Forest Conservation By-Law No, 4071 (Exemption Permit)
- Crossing Permit from Hydro One Networks Inc. (Hydro One)
- Noise by-laws for the Municipality of Arran- Elderslie, Municipality of Kincardine, Township of Huron-Kinloss
- Species at Risk (SAR) Overall Benefit Permit under the *Endangered Species Act, 2007* (ESA 2007)
- Ministry of Natural Resources and Forestry (MNRF) Endangered Species Act Regulation (O. Reg. 230/08)
- Permits under *Ontario Regulations 169/06 and 164/06* (Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses), as per the *Conservation Authorities Act, 1990 from Saugeen Valley Conservation Authority (SVCA) and Maitland Valley Conservation Authority (MVCA)*
- Register water taking activities on the MECP Environmental Activity and Sector Registry (EASR) or Permit to Take Water (PTTW) as per the Ontario Water Resources Act, 1990

2.4 LIMITS AND DISPUTE RESOLUTION PROCESS

There may be a need to revise specific measures outlined in the EPP from ongoing consultation and landowner discussions, permitting requirements or to address unforeseen site-specific conditions that may arise during construction. If this were to occur, EPCOR will resolve the issue with the Project Manager, the Construction Manager, the EPCOR Environmental Lead and the Environmental Inspector in consultation with the appropriate regulators. The resolution and/or revision will be documented and communicated to the appropriate parties.

3.0 ENVIRONMENTAL COMPLIANCE

Introduction

Environmental compliance is facilitated through sharing of information, providing environmental orientations/training, hiring qualified staff and providing onsite inspection of activities through a pro-active and adaptive inspection program.

The EPP serves as the construction guide for environmental issues and commitments and includes pertinent environmental information from the ER (Stantec 2018).

Objectives

The objectives of these mitigation measures are:

- Relevant environmental regulatory requirements, approved environmental protection measures, and approved measures are known and consistently applied.
- Processes are in-place that allow access to Project environmental information to aid in decision making at the field level.
- Environmental Inspectors assigned to the Project are qualified and properly trained.

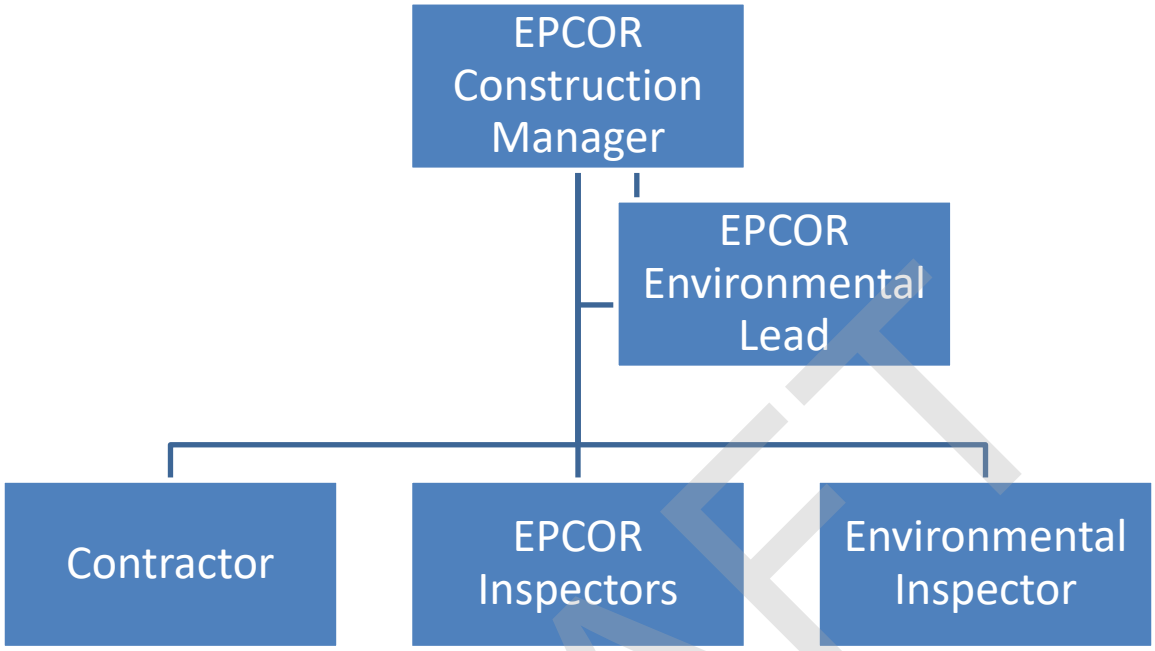
3.1 ENVIRONMENTAL MONITORING PROGRAM

The following table outlines the approach to the environmental monitoring during the Project.

Activity	Preparation Measures
Approvals and Licenses	1. Licenses/approvals/permits should be acquired prior to the commencement of construction. Conditions as presented on permits, approvals, licences, certificates and Project-specific management plans will be adhered to. Inconsistencies between permit conditions and contract documents shall be addressed prior to the commencement of construction. If there are conflicting mitigation measures identified, the most stringent will be followed.
Environmental Lead and Environmental Inspector	2. EPCOR will designate an Environmental Lead for the Project with an Environmental Inspector made available to assist with maintaining environmental compliance during work around sensitive areas.
Environmental Lead and Environmental Inspector's Qualifications	3. The EPCOR Environmental Lead and Environmental Inspector should have experience in pipeline planning/environmental inspection and will understand pipeline construction techniques.
Environmental Lead and Environmental Inspector's Responsibilities	4. The EPCOR Environmental Lead and the Environmental Inspector are responsible for overseeing that environmental commitments, undertakings and conditions of authorizations are met. In addition, the EPCOR Environmental Lead and the Environmental Inspector will monitor that work is completed in compliance with applicable environmental regulations and EPCOR policies, procedures and specifications in the most efficient and effective way possible.

Activity	Preparation Measures
Environmental Lead and Environmental Inspector's Responsibilities (cont'd)	5. Other responsibilities for the Environmental Inspector include: • providing expert advice and guidance on major decisions or courses of action to deal with issues that affect environmental features; • reporting spills in accordance with federal, provincial and municipal regulations and notification protocols and advising EPCOR management on the clean-up and disposal of the material and affected soils or vegetation; • preparing daily reports for submission to EPCOR as required; • review Project-related information prior to the commencement of construction; • preparing, collecting, organizing, and disseminating environmentally-related information and documentation that arises during construction as required by the EPCOR Environmental Lead; • liaise with appropriate government agencies in co-operation with the EPCOR Environmental Lead; • supervising and supporting environmental resource specialists that may be required to support the Project; • reviewing construction methodologies with the Construction Manager; and • collecting environmental information throughout construction for documentation and Project reporting.
EPP and Distribution	6. The EPP will be distributed to EPCOR inspection staff and responsible construction personnel prior to construction. Should updates be required, the EPCOR Environmental Lead will distribute as necessary.
Environmental Alignment Sheets	7. The Environmental Alignment Sheets (**Appendix A**) provide information regarding environmental requirements and will serve as detail to the Engineered Pipeline Construction Drawings.
Preconstruction Environmental Surveys	8. Contractor and Project inspection staff shall be provided with relevant results of preconstruction surveys to identify known locations of environmentally sensitive features (e.g., rare plants and animals, nests, dens, etc.). Site-specific mitigation measures for new sites should be identified on the Environmental Alignment Sheets.
Information Sharing	9. The EPCOR Environmental Lead or Environmental Inspector will facilitate the transfer of environmental information and updates to EPCOR field staff and the Contractor in a timely manner.
	10. A complete set of Environmental Alignment Sheets and environmental documents (i.e., EPP, permits and conditions, etc.) will be kept at the construction field office for the duration of the Project.
Environmental Communication	11. See Figure 2 for a flow chart of the environmental communication for the Project.

Figure 2: Environmental Communication



3.2 ISSUE RESOLUTION

During procedures such as pipeline excavation, HDD, etc., there may be non-compliances or construction techniques that require alteration in construction procedure and approval. Should it be necessary to report non-compliances or modify (create new environmental protection procedures) to address site conditions not anticipated in the EPP, the following processes will be followed.

Activity	Preparation Measures
Non-Compliances and Resolution	12. The EPCOR Environmental Lead or Environmental Inspector will be notified by the responsible person onsite when a non-compliance is identified, and it will be his/her responsibility to contact the Construction Manager. If the Construction Manager is not available during a non-compliance situation, the EPCOR Environmental Lead or the Environmental Inspector has the authority to modify work procedures or initiate work stoppage.
	13. The Construction Manager will either modify the work practice or shut the activity down until corrective actions are determined and implemented. The EPCOR Environmental Lead or the Environmental Inspector will assist in this decision-making process.
	14. If the work is shut-down, it will resume only when corrective actions have been developed and approved by EPCOR. Once approved by EPCOR, the Contractor can proceed utilizing the corrective action plan.
Non-Compliances and Resolution Documentation	15. The EPCOR Environmental Lead or Environmental Inspector will be responsible for daily documentation of procedure modifications to environmental protection measures included in this EPP, environmental non-compliances and providing notification of non-compliances and/or procedural modification to appropriate regulatory agencies.

3.3 NOTIFICATION OF CONCERNED PARTIES AND LANDOWNER ISSUES OR COMPLAINTS

Introduction

Notification of the construction schedule, denoting the timing of specific construction activities, will be provided to concerned parties and affected landowners. This allows regulatory agencies and affected landowners to plan, as appropriate, for construction activities in their area.

Objectives

The objectives of these mitigation measures are:

- Relevant regulatory agencies are kept informed throughout construction.
- Affected stakeholders are aware of Project activities.
- Landowners' issues are documented and addressed as appropriate.

Contacts	Measures
Federal, Provincial and Municipal Agencies	16. The Environmental Inspector or designate will inform appropriate federal and provincial resource agencies and interested municipal officials of the Project developments, as warranted.
Conservation Authority Consultation	17. Consultation should occur with SVCA staff and MVCA staff to determine appropriate mitigation and protective measures.
Landowner Consultation	18. Consultation has been initiated, and will continue, with landowners along the preferred pipeline route to identify methods of minimizing disturbance to their property and maintain access to agricultural fields to the extent possible.
Landowner Issues Log	19. Landowner requests and concerns as they arise in the field will be reviewed to confirm conformance with the environmental commitments. Landowner requests and concerns will be recorded in a Landowner Issues Log which will include the following: • times and dates of requests and complaints received; • the substance of each complaint; • actions taken in response; and • the reasons underlying such actions.
Flooding Notification	20. If flooding necessitates a change in the construction schedule, affected landowners and regulatory agencies should be notified and construction should continue at non-affected locations.
Municipal/Provincial Services Consultation	21. EPCOR should undertake direct consultation with schools and emergency services to communicate construction details and to determine where adjustments to construction logistics or mitigation measures may be warranted. Consultation should also occur with municipal personnel and the Kincardine Golf and Country Club to determine appropriate mitigation and protective measures.
Indigenous Consultation Log	22. Consultation with indigenous communities must be documented in an indigenous consultation log similar to the landowner issues log (Mitigation Measure #19).

4.0 PRECONSTRUCTION MEASURES

Introduction

The following measures will be implemented by EPCOR's Contractor(s) and subcontractor(s) before the initiation of clearing, ground disturbance or other construction activities.

Objectives

The objectives of these mitigation measures are:

- Appropriate surveys, sampling and permitting is completed prior to construction.
- Resources are properly identified and marked in the field before the initiation of ground disturbance to avoid or minimize potential Project effects.
- The construction TWE/ROW is properly delineated to prevent inadvertent trespass onto lands outside of the Project area.
- Access to and from the work sites are properly marked.

Activity/Concern	Mitigation Measures
Butternut Survey	23. Prior to tree removals. it is recommended that a Butternut survey be completed to confirm the presence or absence of this species in (or within 25 m of) the work area, in particular within the TWE. In the event that Butternut is found, a Butternut Health Assessment will be conducted and, if required, obtain authorization under the ESA 2007.
SVCA and MVCA Permits	24. Where work is to occur within conservation authority regulated areas, EPCOR will apply to the SVCA and MVCA for permits as per O. Reg. 16/09 and O. Reg. 164/06.
Stage 2 Archaeological Assessment	25. A Stage 2 Archaeological Assessment (AA) is required for the areas of the TWE if the work easements occur outside of the ROW, as well as for parts of the preferred pipeline route within the existing ROW to determine the presence of archaeological resources.
Heritage Assessment	26. Prior to construction, the Cultural Heritage Assessment Report (CHAR) will be undertaken and submitted to the Ministry of Tourism, Culture and Sport (MTCS) for their review and comment.
Water Well Monitoring Program	27. EPCOR may seek independent professional analysis to assess the need for, and to develop, a well monitoring program, if required.
SAR Awareness Program	28. Prior to activities, a work awareness program will be implemented that includes SAR identification and habitat characteristics.
Road Crossings	29. Approvals will be obtained from the municipalities and the Ontario Ministry of Transportation(MTO) for road crossings.
Utility Lines	30. Necessary permits and conditions of the utilities infrastructure must be met and abided by (e.g., Hydro One). The contractor will be responsible for locating and exposing (as required) existing pipelines and utilities on lands which will be affected by trench excavation.

Activity/Concern	Mitigation Measures
Staking	31. To prevent inadvertent trespass, stake the ROW, TWE, staging areas, etc., to clearly delineate boundaries.
Soybean Cyst Nematode	32. Soil sampling for Soybean Cyst Nematode (SCN) is recommended where construction activity is planned on agricultural crop lands to identify if the lands affected by the Project are already impacted with SCN as a result of past land use.
Environmental Protection Plan Update	33. Prior to construction, the EPP should be updated to add mitigation measures identified during permitting.

5.0 RESOURCE-SPECIFIC PROTECTION AND MANAGEMENT MEASURES

Introduction

This section of the EPP describes the specific environmental protection measures that will be used on the Project to protect identified sensitive environmental features; describe the specific ESC measures to be utilized to limit erosion and protect environmentally sensitive features; and the response in the event of biophysical or cultural resources are discovered.

Objectives

The objectives of these environmental protection measures are to:

- Identify and protect biophysical and cultural resources identified in the ER (Stantec 2018), by Indigenous groups and environmental regulatory agencies.
- Develop and implement the ESC Plan for the Project that minimizes risk of sedimentation to sensitive features during construction and after restoration.
- Describes the specific response measures should historical or Indigenous artifacts, human remains and/or SAR are identified during the construction phase of the Project.

5.1 SENSITIVE RESOURCES

Activity/Concern	Mitigation Measures
Timing Restrictions: Watercourses	34. In-water works for coldwater habitats is typically permitted from July 15 to September 1 (no work from September 2 to July 14) (MNRF 2013). The SVCA also has an in-water construction window of June 1st to September 15th.
Timing Restrictions: Migratory Birds	35. Construction activities such as vegetation clearing (within meadows, hay fields, woodlots, vegetated road ditches and pastures, etc.) with the potential to remove or disturb nesting birds or migratory bird habitat protected under the Migratory Bird Convention Act (MBCA), should be avoided to the extent possible during the breeding season which is generally from April 1- August 31 in southern Ontario (Environment Canada, 2014). Removals could take place during this restricted time period only if the requirements of the MBCA are met by completing nest clearing surveys by qualified individuals no more than seven days prior to clearing activities. See Mitigation Measure #44 (*Nest Searches)* in Section 5.1.
Timing Restrictions: Amphibians	36. Where practical avoid construction within 20 m of wetland communities during the amphibian breeding season (March 1 – June 30). See Environmental Alignment Sheets (**Appendix A)** for potential locations.
Timing Restrictions: Bats	37. To mitigate disturbance or potential harm to roosting bats, tree clearing is to be completed outside the roosting timing window for bats (May 1 and August 31).
Timing Restrictions: Snakes	38. Where possible, removal of vegetation should be conducted between November 1 and April 15 when snakes are hibernating.

Activity/Concern	Mitigation Measures
Environmental Resource Delineation	39. Minimize clearing and disturbance to natural areas to the extent possible, including sensitive areas such as unstable soils, wetlands, and areas of significant groundwater recharge or discharge.
	40. Clearly mark sensitive resources, setbacks from watercourses, etc., identified on the Environmental Alignment Sheets (**Appendix A**) within the immediate vicinity before the start of clearing. Posts and rope or snow fencing may be necessary to delineate sensitive environmental resources along the TWE/ROW.
	41. Post signs in the vicinity of sensitive environmental features to alert workers of these items.
Wetlands and Riparian Zone Identification	42. A screening field program of wetlands and riparian areas should be undertaken prior to construction.
Watercourse/Wetland Crossings	43. Follow mitigation measures outlined in Sections 7.5 and 7.6 of this EPP, and conservation authority permits.
Nest Searches	44. In instances where vegetation clearing within the migratory bird restricted timing window is unavoidable, a nest search of the area to be cleared can be undertaken to identify nests of species protected under the MBCA. Nest searches in trees, shrubs and ground vegetation on and adjacent to the ROW will be conducted by a qualified wildlife biologist a maximum of 7 days before clearing activities commence. The results of the survey will be reported to the Environmental Inspector. In the event that an active nest is observed on or off the ROW, a species-specific setback distance to vegetation clearing will be recommended and adhered to. If construction does not commence within 7 days, another survey must be completed prior to construction activities.
Breeding Bird Setbacks	45. Restrict activities to a species-specific radius of an active nest in consultation with a qualified biologist.
Bat Maternity Colony Habitat	46. Construction activities are not anticipated to impact existing structures; however, if it is determined that a structure is required to be removed or altered during project construction, mitigation measures will be developed and implemented prior to building removal.
Avian Species at Risk	47. Vegetation removal should be avoided to the extent possible in adjacent grassland (i.e. hay, pasture or meadow), woodland or marsh habitat to avoid damage to potential avian species at risk habitat. Furthermore, construction equipment traffic adjacent to these habitats should be kept to the minimum necessary to complete the pipeline construction.
Wildlife/Livestock Encounters	48. If wildlife or livestock is discovered in the trench, or in other construction areas, report to the EPCOR Environmental Lead or the Environmental Inspector who will contact the applicable regulatory authorities, as required. In the case of livestock, the land agent assigned to the Project will contact the landowner.
	49. Precautionary mitigation measures to be implemented in the unlikely event that a wildlife encounter occurs include: • Equipment and vehicles are to yield the right-of-way to wildlife; and • If wildlife is encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site on its own accord.
Wildlife Encounters Reporting	50. Report incidents with nuisance wildlife or collisions with wildlife to the Environmental Inspector, who will notify local wildlife authorities and the police as appropriate.
Nuisance Wildlife	51. Nuisance and large wildlife encounters (e.g., nuisance bears) or incidents involving wildlife should be reported to the MNRF.

Activity/Concern	Mitigation Measures
Reptiles	52. Brush and trees felled should be removed immediately from the Project footprint to discourage use of these features by snakes.
	53. To mitigate project interaction with reptiles, a thorough visual search of the work area should be conducted by construction contractors before work commences each day during the reptile active season (April 15 – November 1). Visual searches will include inspection of machinery and equipment, prior to starting equipment. If reptiles are encountered during construction, work at that location will stop until the reptiles leave the project area on their own accord.
	54. Standard environmental protection measures for erosion and sediment control will also serve as a wildlife barrier where construction borders areas of natural vegetation.
Species at Risk Observation	55. If a SAR is observed, work should be stopped in the immediate vicinity to prevent harm or harassment of the individual and allow the species to passively remove themselves from the worksite. If the species does not remove themselves passively, it may potentially be removed by a qualified ecologist using approved MNRF handling protocols and relocated away from the construction area to prevent incidental harm as advised by the EPCOR Environmental Lead or the Environmental Inspector.
Wildlife Movements	56. Leave gaps in windrows (i.e., grubbing piles, topsoil, grade spoil, strung pipe) at obvious drainages and wildlife trails. Locations where wildlife gaps are appropriate will be determined in the field by the Environmental Inspector.
Phragmites australis	57. In the event Phragmites is encountered, the following environmental mitigation and protective measures are recommended by the MNRF (2011) and Peterborough Stewardship Council Ontario Invasive Plant Council (Halloran et. al. 2013): • Avoid activities in phragmites area to the extent possible, demarcate areas of phragmites adjacent to the roadside and identify with appropriate signage. • In areas where phragmites cannot be avoided, clean machinery post construction. • Remove large accumulations of dirt using a compressed air device, high pressure hose or other device as necessary. Clean the vehicle starting at the top and working down, with attention to the undersides, wheels, wheel arches, guards, chassis, engine bays, grills and other attachments. • Clean vehicles, equipment and heavy machinery in an area where risk of contamination is low, ideally on a mud free hard surface, at least 30 m away from watercourses, waterbodies and wetlands, if possible. Cleaning should be completed adjacent to the source area to avoid contamination of other areas. • Place and seal Phragmites material removed during cleaning in a plastic bag and deposit it in a landfill.
Riparian Zones	58. Flag the edge of the riparian buffer zone before site disturbance occurs adjacent to wetlands and implement the appropriate mitigation measures (see Section 7.5).
Water Wells	59. Should a private water well be affected by project construction, a potable water supply should be provided, and the water well should be required or restored as required.
Archaeological Resources	60. The collection of Indigenous or historical resources by Project personnel is prohibited.

5.2 EROSION AND SEDIMENT CONTROL PLAN

Activity/Concern	Mitigation Measures
Sediment and Erosion Control Requirements	61. As an initial stage of construction, standard ESC methods should be implemented on active areas.
	62. Where there is potential for soil erosion, ESC measures should be determined by a qualified inspector.
	63. Where evidence of erosion exists, implementing corrective control measures as soon as conditions permit.
Permit Requirements	64. ESC measures required by regulatory authorities must be implemented as approved.
Natural Feature Preservation	65. Natural features should be preserved to the extent practical.
Soil Exposure	66. When land is exposed, the exposure should be kept to the shortest practical time.
Environmental Inspector's Recommendations	67. During the construction phase, the Environmental Inspector or the EPCOR Environmental Lead, in consultation with the Construction Manager and, if required, the appropriate regulatory authority, will determine appropriate procedures to be implemented to control/prevent soil erosion and sedimentation due to precipitation and wind throughout construction.
Watercourses/ Waterbodies/Wetlands	68. Exposed soils surrounding watercourses, waterbodies or wetlands should be seeded immediately following construction in consultation with the landowner or per regulatory specifications.
Temporary ESC	69. Temporary ESC measures should be maintained and kept in place until work within or near sensitive features has been completed and stabilized.
	70. ESC features should be improved or added to in areas requiring more protection.
	71. Temporary sediment control measures should be removed at the completion of the work but not until permanent ESC measures have been established.

Activity/Concern	Mitigation Measures
Water Erosion	72. Mitigation measures to protect against water erosion should be implemented and maintained as per this EPP and regulatory permits. ESC mitigation measures which may be utilized during construction include: • suspend construction until the risk of erosion has been reduced or the conditions improve; • construct temporary berms of subsoil, sandbags or bales during construction activities; • construct temporary cross ditches, if approved by landowner; • seed with annual cereal crop or sterile hybrid if approved by the landowner; • install sediment fence; • install cross ditches and diversion berms; • install Silt Soxx™; • armour berms and ditches with sediment control logs, polyethylene tarps or sandbags; • apply hydromulch, tackifier, terraseed or erosion control growth media blanket; • seed an annual cover crop; • plant native shrubs or willow cuttings; • crimp straw on exposed soil; • install netting, erosion control blanket; and/or • install and stake sod.
High Winds	73. During construction activities, weather should be monitored to identify the potential onset of high wind conditions which can cause wind erosion. Should high winds occur, protective measures such as the following should be implemented: • suspend earth moving operations; • apply dust suppressants; and/or • protect soil stockpiles with a cover, barrier or windscreen. In conjunction with the above measures, required materials and equipment should be readily accessible and available for use as required.
	74. Watering for dust control must not result in the formation of puddles, rutting by equipment or vehicles, the tracking of mud onto roads or the siltation of watercourses.
Slopes	75. Place ESC measures at intervals along the slopes where necessary.
ESC Typicals	76. ESC Typicals are included in Appendix B of this EPP including: a) XXXX
Additional ESC Measures	77. ESC features should be improved or added to in areas requiring more protection.
Duration of ESC Measures	78. ESC measures should be maintained until disturbed ground has been permanently stabilized.
Re-vegetation	79. Final landscaping and vegetation should be installed as soon as practical (see Section 7.6 of this EPP).
Slope Re-establishment	80. Re-establishing slopes and applying hydro-mulching and hydroseeding with quick germinating seed mixture appropriate to surrounding vegetation immediately following construction and watercourse crossing.
Maintenance	81. ESC features should be regularly inspected and maintained. Repairs to ESC measures and structures must be completed within 48 hours if damage occurs.
Monitoring Post-Restoration	82. Monitoring and maintaining ESCs during construction, restoration and rehabilitation until vegetative cover is established;

Activity/Concern	Mitigation Measures
Clean-up and Reclamation	83. Remove sediment barriers that remain after disturbed areas are appropriately stabilized and revegetated.

5.3 UNPLANNED DISCOVERY OF ARCHAEOLOGICAL OR ENVIRONMENTAL RESOURCES AND HUMAN REMAINS

Activity/Concern	Mitigation Measures
Historical Resource and Traditional Land Use (TLU) Discovery	84. Should previously unknown archeological resources be uncovered or suspected of being uncovered during construction: • ground disturbance in the find location should cease immediately. • MTCS and an archaeologist licensed in the Province of Ontario should be notified immediately. • A site-specific response plan should then be employed following further investigation of the find. The response plan would indicate under which conditions the ground disturbance activity in the find location may resume. • Work shall not resume until Construction Manager provides approval. • The Environment Inspector will mark areas that are required to be avoided if applicable.
Discovery of Human Remains	85. If human remains are uncovered or suspected of being uncovered during ground disturbance, the following authorities should be notified: • local police; • the coroner's office; and • the Cemeteries Regulation Unit of the Ontario Ministry of Government and Consumer Services (1-800-889-9768).
Rare Plants / Rare Ecological Communities	86. If rare plants or ecological communities are discovered during vegetation studies, clearing, construction activities, etc., notify the EPCOR Environmental Lead or the Environmental Inspector. The plant or ecological community will be assessed for the location, relative rarity of the plant, local abundance, growth habitat and propagation strategy and the habitat preferences. Appropriate mitigative measures will be determined by the resource specialist and may include delineation and avoidance, temporary cover, extending HDDs, realigning route or the propagation and transplanting. Appropriate mitigation measure will be determined by the resource specialists.
Sensitive Species or SARs	87. Report sightings of sensitive species or SARs to the Environmental Inspector. Sightings of SARs are to be reported to MNRF within 24 hours. Specific protection measures may be implemented and the sighting will be recorded in daily reports and located on the environmental as-built alignment sheets. See Mitigation Measure #50; *Wildlife Encounters Reporting* in Section 5.1 (*Sensitive Resources*).

6.0 GENERAL ENVIRONMENTAL PROTECTION MEASURES

Introduction

The general environmental protection measures provided below are applicable to work areas throughout the construction phase. These general measures are followed by detailed specifications for each phase of new pipeline construction.

Objective

The objective of these mitigation measures is to avoid and reduce the potential environmental effects associated with general pipeline construction activities.

Activity/Concern	Mitigation Measures
Work Hours	88. To the greatest extent practical, actives that could create noise should be restricted to daylight hours and adhere to local noise by-laws.
Construction Duration	89. Construction should be conducted as expeditiously as possible, to reduce duration of activities.
Waste Disposal	90. Construction debris and other waste materials will be collected by the Contractor and disposed of at a landfill.
Invasive Species Management Plan	91. An invasive species management plan should be developed, as measures (e.g., equipment washing before site access) may be necessary to mitigate the spread of invasive species.
	92. XXXXX
Public Access	93. Access to residential properties must be maintained.
	94. Discourage unauthorized public vehicle access within the TWE/ROW using signs and gates, where required.
Public Safety	95. Safety fence will be installed at the edge of the construction TWE/ROW where public safety considerations are required.
	96. Safety fencing will be installed where necessary to separate the work area, and signs will be placed as necessary to direct pedestrian's safety around the work area.
ATV Use	97. Recreational use of all-terrain vehicles (ATVs) by construction personnel on the TWE/ROW is prohibited.
Local Procurement	98. EPCOR should make reasonable efforts where practicable to procure services and materials from local suppliers, where services or materials are available in required quantity and at competitive prices.
Fire Prevention	99. Project personnel must be made aware of the proper disposal methods for welding rods, cigarette butts, and other hot or burning material.
	100. Smoke only in designated areas.
	101. Appropriate emergency fire suppressant equipment should be stored on site for each piece of equipment.
Wildlife Harassment	102. Project personnel are not permitted to hunt or fish on the work site. Construction personnel will not threaten, harass of injure wildlife.

Activity/Concern	Mitigation Measures
Use of Workspace	103. Construction activities and traffic will be restricted to the approved TWE/ROW, existing roads and planned access.
Demolition of Existing Structures	104. Construction activities are not anticipated to impact existing structures; however, if it is determined that a structure is required to be removed or altered during project construction, mitigation measures will be developed and implemented prior to building removal.
Soybean Cyst Nematode	105. If a field is identified as having SCN, the following mitigation measures should be considered: • To the extent feasible restrict construction activity to the non-agricultural pipeline construction area. • If the pipeline route or an adjacent farm field is identified as having SCN, equipment and boots should be properly cleaned before moving to an area that has not been shown to be impacted by SCN. This may involve thorough washing before moving equipment from an impacted field to non-impacted field. • Properties impacted with SCN should be identified and communicated to the Contractor. A best practice protocol will be developed to handle SCN, with assistance from Stantec. • Topsoil imported for cleanup activities should be analyzed for SCN by collecting a composite sample, sending it to a lab for analysis and reviewing results before imported topsoil is placed on the easement. Imported suitable fill (not containing topsoil) or granular materials do not need to be tested for SCN.
Significant Precipitation Event	106. Work should be limited or stopped during and immediately following significant precipitation events (i.e. 100-year storm event), at the discretion of on-site environmental personnel.
Climatic Conditions	107. To reduce construction impacts associated with wet climatic conditions, the other components of the construction are recommended to occur during dry soil conditions.
	108. Lands affected by heavy rainfall events and wet soil conditions should be monitored, to avoid the potential for topsoil and subsoil mixing.
	109. Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended. During wet soil conditions heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Usually, construction may continue from gravel or existing roadside work surfaces during wet soil conditions.
Wet Weather Shutdown	110. Construction activities should be temporarily halted on lands where excessively wet soil conditions are encountered. EPCOR's on-site inspection team should determine when construction activities may be resumed.
Wet Weather Conditions	111. Soils are considered excessively wet when the planned activity could cause damage to soils either due to rutting by traffic through the topsoil layer into the subsoil; soil structure damage during soil handling; loss of topsoil due to erosion, compaction and associated pulverization of topsoil; and topsoil structure damage due to heavy traffic.
Construction During Wet Conditions	112. If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as: confining construction activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.

Activity/Concern	Mitigation Measures
Agricultural Drains	113. Although not anticipated in the road ROW in the event fields with tile drainage are encountered along the route, the following mitigation measures should be followed: • Excavate the pipeline trench to a depth that would allow clearance between the top of the pipeline and the bottom of existing drainage systems. • Record and flag severed or crushed tile drains. • Temporarily repair main drains, header drains, or large diameter drains, if severed, to maintain drainage and prevent flooding of the TWE and adjacent lands. • Cap the downstream side of the severed drains that cross the trench to prevent entry of soil, debris and rodents. • Repair damaged and severed drains following construction. • Before backfilling, invite the landowner to inspect and approve the repair(s).
Traffic Laws	114. Construction traffic will adhere to safety and road closure regulations, and the appropriate traffic control management procedures.
Vehicle Requirements	115. During construction, motorized construction equipment should be equipped with mufflers and silencers as available.
	116. Company and construction personnel should avoid idling of vehicles; vehicles or equipment should be turned off when not in use unless required for operation of the vehicle or equipment.
	117. The contractor should implement site practices during construction that are in line with the Environmental Canada document 'Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities' (Cheminfo Services Inc., 2005), which may include: • Maintaining equipment in compliance with regulatory requirements. • Protecting stockpiles of friable material with a barrier or windscreen in the event of dry conditions and dust. • Dust suppression of source areas. • Covering loads of friable materials during transport.
Road Closures	118. If a road closure is necessary, EPCOR will work with the appropriate representatives to develop a plan to maintain access and for communication.
Traffic Management Plan	119. A traffic management plan will be implemented for roads affected by construction, which at a minimum, outlines measures to: • Control the movement of materials and personnel to and from the construction site • Post signs to warn oncoming motorists of construction activity • Control traffic at road crossings • Reduce on-road disturbance and land closures • Store equipment as far from the edge of the road as practical • Install construction barricades at road crossings
	120. If road crossings via open cut are required a Traffic Management Plan will be developed.
Hazardous Substance Storage	121. Deleterious substances (fuel, oil, spoil) should be stored >30 m from the watercourse. A deleterious material that inadvertently enters a watercourse should be removed in a manner satisfactory to the environmental inspector
Welhead Protection Area	122. Fuel should not be stored within an Wellhead Protection Area (WHPA-A). See Environmental Alignment Sheets (Appendix A) for details.

Activity/Concern	Mitigation Measures
Refuelling and Maintenance	123. Equipment maintenance and refueling should be controlled to prevent entry of petroleum products or other deleterious substances, including debris, waste, rubble or concrete material, into a watercourse, unless otherwise specified in the contract.
	124. Refueling of equipment should be undertaken 50 m from wetland areas identified during field surveys, watercourses (particularly Lake Huron and its nearby tributaries), significant groundwater recharge areas and WHPAs to reduce potential impacts to surface water and groundwater quality in the event that an accidental spill occurs.
	125. Refueling of equipment should be undertaken using a two-person refueling system with one worker at each end of the hose.
	126. Fuel nozzles should be equipped with automatic shut-offs.
	127. The contractor should implement management protocols such as secondary containment of temporary fuel storage and preparation of a spill response plan.
	128. Bulk fuel trucks, service vehicles and pick-up trucks equipped with box-mounted fuel tanks shall carry spill prevention, containment and clean-up materials that are suitable for the volume of fuels or oils carried. Spill contingency material carried on bulk fuel and service vehicles shall be suitable for use on land and water.
	129. Inspect hydraulic, fuel and lubrication systems of equipment to confirm systems are in good working condition and free of leaks. Equipment to be used in or adjacent to a watercourse or waterbody during emergency response during an HDD will be clean or otherwise free of external grease, oil or other fluids, mud, soil, and vegetation.
	130. An impervious tarp shall be in place underneath equipment/vehicles when servicing equipment/vehicles with the potential for accidental spills (e.g., oil changes, servicing of hydraulic systems, etc.) in accordance with regulatory conditions.
Pets	131. No pets are permitted on the work site.
Noise	132. Contractor should adhere to local noise by-laws and take reasonable measures to control construction related noise near residential areas. Alter equipment, erect noise barriers, or change the work schedule if excessive noise becomes a nuisance to nearby residents.
	133. Where pipeline installation will take an extended time to complete, such as watercourse and road crossings, an assessment should be undertaken to determine the suitability and effectiveness of temporary noise barriers adjacent to residential or business properties.
	134. Sources of continuous noise, such as portable generators, should be shielded or located to reduce disturbance to residents and businesses
Private Access	135. Where agricultural land adjacent to the ROW is typically accessed by crossing the ROW alternate access to the fields will be provided for the farm operator for the short period of time during construction that access across the ROW is not possible.
Emergency Services Consultation	136. EPCOR should undertake direct consultation with schools and emergency services to communicate construction details and to determine where adjustments to construction logistics or mitigation measures may be warranted.
Washing Equipment	137. Equipment or machinery shall not be washed within 100 m of watercourses or wetlands.

Activity/Concern	Mitigation Measures
Air Quality / Emissions	138. The contractor must have well-maintained equipment during construction and maintenance activities to reduce emissions.
	139. Where practical, use multi-passenger vehicles for the transport of crews to and from the job sites.
	140. The contractor should implement site practices during construction that are in line with the Environment Canada document 'Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities' (Cheminfo Services Inc. 2005.), which may include: • Maintaining equipment in compliance with regulatory requirements. • Protecting stockpiles of friable material with a barrier or windscreen in the event of dry conditions and dust. • Dust suppression of source areas. • Covering loads of friable materials during transport.
Dust Control	141. Where Project traffic creates a hazardous or irritating level of dust to nearby residents, dust control on existing access roads will be achieved through the application of calcium carbonate (or equivalent) or water.
	142. Speeds for vehicles should be controlled and reduced in high wind conditions.
Contaminated/ Suspect Soils Notification	143. Should potentially contaminated soils be encountered during construction, EPCOR should notify the EPCOR Environmental Lead immediately. The EPCOR Environmental Lead in consultation with the Environmental Inspector will determine if conditions are suitable to resume work.
Dewatering Within Contaminated Soil Trench	144. If dewatering is required in a contaminated soil area, see Section 7.4.
Spill Notification	145. In the unlikely event of a spill, spills containment and clean-up procedures should be implemented immediately. EPCOR will contact the MECP Spills Action Centre. The MECP Spills Action Centre is the first point of contact for spills at the provincial and federal level.at **1 (800) 268-6060** for reportable spills.
	146. In the event of a spill or inadvertent drilling mud release in a CA regulated area; the CA should be contacted immediately.
Spill Response Plan	147. Following initial response of a spill of a hazardous material, the following containment procedures should be carried out: • Notify supervisor immediately and warn others working near the spill. • Identify the product, stop the release at the source and physically contain the spill as soon as safe to do so. • Avoid use of water or fire extinguishing chemicals on non-petroleum product spills since many chemicals react violently with water and chemical extinguishing agents may release toxic fumes. In addition, chemicals may be soluble in water and dispersal makes containment and clean-up more difficult. • Spilled petroleum product is contained. • The contaminated area is cleaned-up. • Dispose of sorbent pads, contaminated soil and vegetation at an approved facility.

Activity/Concern	Mitigation Measures
Spill Containment Within or Adjacent to Wetlands and Watercourses	148. Follow the general guidelines listed below for spills adjacent to or in a watercourse or wetland (in addition to mitigation measures listed in Mitigation Measure #148): • Construct berms and/or trenches to contain spilled product prior to entry into a watercourse or wetland. • Deploy booms, skimmers, sorbents, etc., if feasible, to contain and recover spilled material from a watercourse or wetland. • Clean up spilled product. • Implement additional clean-up measures resulting from consultation with the appropriate regulatory authorities.
Waste Management	149. The construction contractor should implement a site-specific waste collection and disposal management plan, which may include: • Waste materials, sanitary waste and recycling transported off-site by private waste contractors licensed by the MECP • The responsible management of fill. • Labelling and storage of hazardous and liquid wastes in a secure area that would contain material in the event of a spill. • Implementation of a waste management program consisting of reduction, reuse, and recycling of materials.

7.0 PIPELINE CONSTRUCTION

Pipeline construction includes general environmental protection measures to be considered throughout new pipeline construction, survey and foreign utility locates, vegetation clearing, topsoil salvage and grading, pipe activities, watercourse and wetland crossings, hydrotesting, backfill and clean-up.

7.1 SURVEY AND LOCATES

Introduction

The mitigation measures outlined in this section apply to the ROW and TWE prior to ground disturbance. Identification of foreign crossings such as other pipelines, utility lines (buried, laying on the ground or overhead), communication cables, roads, railway lines and other underground structures will also be identified prior to construction.

Objectives

The objectives of these environmental protection measures are to:

- Limit the Project footprint to the approved workspace.
- Avoid or reduce the potential disturbance of site-specific environmental resources.
- Locate utility line crossings in consideration of environmental resources.

Activity/Concern	Mitigation Measures
TWE/ROW Staking	150. The limits of clearing should be surveyed and clearly staked in the field.
	151. Maintain staking, fencing, flagging and signage during construction.
	152. The Construction Manager should verify the final alignment and areas of environmental concern have been properly flagged, staked and/or fenced.
Flagging HDD Drillpath	153. Before starting HDD operations, the drilling contractor or surveyor will clearly flag the expected drill path on both sides of the watercourse.
TWE/ROW Locations	154. Workspaces, unless necessary for watercourse crossings, should be located above the floodplain to the extent practical.
	155. Minimize clearing and disturbance to natural areas to the extent possible, including sensitive areas such as unstable soils, wetlands, and areas of significant groundwater recharge or discharge.
Work around Above and Below Ground Infrastructure	156. Existing pipelines and utilities on lands which will be affected by trench excavation and or drilling will be located, flagged and/or exposed.
	157. Lines that may interfere with the operation of construction equipment will be identified with warning poles strung together with rope and suspended red flags. In addition, crossing agreements and the conditions required with utilities, including Hydro One, etc., will be adhered to at all times.

Activity/Concern	Mitigation Measures
Clean-up of Flagging/Stakes	158. After reclamation is complete, remove stakes, flagging and fencing, and dispose of at an approved landfill facility or re-use as suitable.
Hydrovacing	159. On agricultural land, salvage topsoil over the foreign line(s) prior to exposing with a hydrovac where possible.
	160. Empty the hydrovac truck at approved locations in adherence to local provincial and municipal regulations. Hydrovac material should be contained within the designated release area (i.e., will not migrate to a waterbody or onto topsoil). Backfill holes with clean fill when work is completed.

7.2 VEGETATION CLEARING

Introduction

The following measures will be implemented by EPCOR's Contractor(s) and subcontractor(s) during the clearing phase of pipeline construction.

Objectives

The objectives of these environmental protection measures are to:

- Limit the disturbance to wildlife, watercourses and wetlands.
- Reduce the potential for erosion that facilitates reclamation of disturbed areas.

Activity/Concern	Mitigation Measures
Timing	161. Avoid clearing during the bird breeding and nesting window (see Section 5.1 Sensitive Resources). If clearing is required during the breeding season, nest searches and a habitat assessment for bat SAR must be completed. See Mitigation Measure #44 in Section 5.1.
	162. Clearing should be done during frozen or dry soil conditions to the extent practical to limit disturbance to vegetation and terrain.
Tree Permits	163. Tree cutting should be done in consideration of municipal bylaws relating to tree preservation throughout the preferred pipeline route.
Limits	164. Vegetation removal should be avoided in adjacent grassland (i.e. hay, pasture or meadow), woodland or marsh habitat to avoid damage to potential avian SAR habitat.
	165. The limits of the construction footprint should be identified in the field, to allow for the protection of off-site natural areas and vegetation.
	166. Do not allow clearing or grubbing beyond the staked and/or flagged construction TWE/ROW boundaries.
Bird Nest Discovery	167. If trees and/or grass/meadow area within or directly adjacent to the TWE/ROW is to be cleared and contains an active bird nest, immediately suspend the work activity near the nest. Fence and/or flag off the area with the appropriate set-back see Section 5.1 *Sensitive Resources*.
Tree Removal	168. Brush and trees felled should be removed immediately from the Project footprint to discourage use of these features by snakes.

Activity/Concern	Mitigation Measures
Tree Replacement Program	169. If trees are required to be removed, tree replacement should be undertaken satisfactory to the landowner, and consistent with municipal requirements.
Clearing on Slopes	170. On erosion-prone or steep slopes, consider postponing grubbing and stumping until immediately prior to the pipeline grade activity, leaving a temporary buffer zone extending back from the crest of the slope, implementing hand clearing, or using equipment capable of harvesting on slopes which leave stumps and roots in place.
Clearing Near Watercourses	171. Clearing of vegetation or grading should not occur within the limit specified in the applicable permits, or within 15 m if the watercourse is not regulated.
	172. Postpone clearing near watercourses and wetlands until immediately prior to crossing construction except, if necessary, to install vehicle travel routes through wetlands. Where the EPCOR Environmental Lead approves earlier clearing, leave the vegetative ground mat and root structure intact.

7.3 TOPSOIL SALVAGE AND GRADING

Introduction

Construction is scheduled to occur during non-frozen conditions. Topsoil will be salvaged during construction and stored for restoration, ensuring that appropriate material handling procedures are implemented as required.

Objectives

The objectives of these mitigation measures are to:

- Conserve soil resources and maintain post-construction soil productivity.
- Reduce impacts on agricultural productivity, surface drainage patterns and aquatic, wetland and wildlife habitat.

Activity/Concern	Mitigation Measures
Topsoil Stripping	173. To avoid loss of soil, topsoil from lands directly affected by construction of the pipeline should be stripped.
	174. Topsoil should be stripped and salvaged during dry soil conditions and stockpiled for use during cleanup and rehabilitation.
	175. Identification of the topsoil and subsoil interface should be carefully monitored so that topsoil with limited subsoil is stripped from the easement.
	176. Two-lift (topsoil/spoil) soil salvage will occur in areas where topsoil is present along the TWE/ROW.
Environmental Inspection	177. The Environmental Inspector should oversee topsoil salvage in areas where: • there is poor colour change between topsoil and subsoil; • there are erodible soils; • a three-lift soils handling method is required; and/or • there is uncertainty about the depth of topsoil salvage.
Stripping Width	178. Topsoil stripping on the ROW should be sufficiently wide so that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil.

Activity/Concern	Mitigation Measures
Erosion and Sediment Controls	179. ESC measures must be installed where practical at sensitive features (watercourses and wetlands) prior to stripping and monitored throughout construction (see Section 5.2 for specific measures).
Soil Stockpiles	180. In locations prone to erosion, soil stockpiles should be protected with silt fencing. At least 1 m should separate soil piles to avoid mixing topsoil with subsoil. On agricultural lands, subsoil should be stored on lands stripped of topsoil (subsoil on subsoil).
	181. Topsoil or spoil material should not be stored under the drip lines of trees, including spoil.
	182. On agricultural lands, spoil should be stored on lands stripped of topsoil (i.e., spoil on subsoil).
Landowner Requests	183. Accommodate topsoil salvage preferences of the landowner, if feasible. Record locations where the landowner has requested topsoil handling which differs from original plans.
Graded Material Storage	184. Do not store or push graded materials in to treed areas. Graded material must not spread off the construction TWE/ROW.
	185. At locations where topsoil salvage occurs to accommodate grading requirements, differentiate the soil piles/windrows from the graded materials with a suitably marked survey stake or sign.

7.4 PIPE ACTIVITIES (EXCAVATION, STRINGING, WELDING, COATING, DEWATERING)

Introduction

The general mitigation measures provided below are applicable to work areas throughout the TWE/ROW where pipe activities are occurring.

Objectives

The objectives of these mitigation measures are to:

- Minimize landowner and wildlife disruptions.
- Avoid impacts during dewatering of trenches and hydrostatic test.
- Not leaving waste and garbage onsite.

Activity/Concern	Mitigation Measures
Trench Construction Duration	186. Trench construction should be limited in duration and followed as closely as practical with backfill operations, to facilitate the minor occurrences of wildlife movement across the trench.
Landowner Disruptions	187. Coordinate with landowners to reduce access disruption caused by trenching or pipe stringing.
Landowner Access	188. Where agricultural land adjacent to the TWE/ROW is typically accessed by crossing the TWE/ROW, an alternate access to the fields or additional compensation should be provided for gored lands.

Activity/Concern	Mitigation Measures
Gaps	189. If requested by the landowner, under permit requirements or the appropriate regulatory authority, leave gaps in strung pipe, welded pipe and spoil windrows at regular intervals to allow passage of vehicles and wildlife.
Pipe Caps	190. Cap pipe ends to prevent wildlife from becoming trapped or confined. If pipe caps are not installed, check for confined or trapped animals prior to pipe movement/ installation.
Welding and Coating	191. Do not leave spent welding rods, filings/shavings from end preparation, or cut off pipe rings on the ground or in the trench. During bevelling operations, collect pipe bevel shaving debris to prevent wildlife from ingesting the shavings.
Sandblasting	192. Clean-up of sandblasting material should occur to the extent practical.
Overspray of Coating	193. Where spray or paint-on coatings are applied, place a tarp of sufficient size to block overspray from contacting the ground under the operation.
Daily Inspections	194. Inspect the trench at the start of each day and coordinate with the Environmental Inspector to remove trapped animals from the trench before commencing construction activities.
Excavation Instability	195. Where excavations of the trenches occur in immediate proximity to the roads or road embankments, the use of a temporary shoring system such as trench boxes (or a more rigorous shoring system for deeper sections) will be required to mitigate potential disturbance/damage to the road and existing infrastructure.
	196. The open cut excavations must be conducted in accordance with the requirements of the *Occupational Health and Safety Act* and Regulations.
Permit to Take Water	197. PTTW or ESAR will be required from the MECP if it is anticipated that groundwater dewatering may exceed 50,000 litres/day.
Dewatering	198. Visually inspect trench water for debris (e.g., floating solids, visible foam) and/or hydrocarbon sheen prior to dewatering. Remove floating debris, if feasible, prior to release. If a hydrocarbon sheen is observed, implement the mitigative measures presented under the '*De-Watering Trench with Potential Contaminants'* heading below. If evidence of contamination is present, contact the Environmental Inspector or the EPCOR Environmental Lead immediately.
	199. To reduce the potential for erosion and scouring at dewatering points, energy dissipation techniques should be used.
	200. At dewatering points, discharge piping should be free of leaks and should be properly anchored to prevent bouncing or snaking during surging. Protective measures may include dewatering at low velocities, dissipating water energy by discharging into a filter bag or equivalent and utilizing protective riprap or equivalent. If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or dewatering discontinued until satisfactory mitigation measures are in place.
	201. Use a floating suction hose equipped with a screen and elevated intake, or other measures, to prevent sediment from being sucked from the bottom of the trench.
Secondary Containment of Pumps	202. Place equipment (e.g., pumps, generators) on polyethylene sheeting or other suitable containment to prevent spills. Where possible, place equipment above the normal high-water mark of watercourses or wetlands.

Activity/Concern	Mitigation Measures
Discharge Area	203. Dewatering should be a minimum distance of 30 m from a watercourse or wetland with the flow path not occurring directly into either a wetland or a watercourse. Discharged water should not enter a wetland or watercourse.
	204. Discharged water must be retained on the property where it was encountered.
	205. Obtain approval from municipality and downstream landowner(s) if water is to be discharged into a bar ditch or could otherwise leave the property.
Dewatering Discharge Entering Waterbody	206. If dewatering discharge reaches a local watercourse, waterbody or wetland, discharge water must not exceed the least stringent criterial of 8 Nephelometric Turbidity Units (NTUs) above or 10% above the background levels of the nearest water body.
Dewatering in Wetlands	207. Do not dewater wetlands. Although temporary dewatering may be required during trenched wetland crossings, water should not be permanently removed from the wetland. Options for trench dewatering within wetlands should be discussed with the Environmental Inspector, the EPCOR Environmental Lead and the appropriate regulatory authority to develop the appropriate plans.
Dewatering Trench with Potential Contaminants	208. If anticipation of dewatering a trench with suspected potential contaminants which could become dissolved, the EPCOR Environmental Lead must be immediately notified and will provide guidance.

7.5 WATERCOURSE AND WETLAND CROSSINGS

Introduction

Pipeline construction has the potential to affect habitat, hydrologic and water quality functions of wetlands and watercourses. Construction activities may be minimized in wetlands and/or special construction techniques may be necessary to reduce disturbance to plants, soils and wetland function (e.g., hydrologic, water quality and habitat).The mitigation measures outlined in this section apply to watercourses and wetland crossings on or near the ROW and TWE.

Objectives

The objectives of these mitigation measures are to:

- Avoid or reduce adverse effects to watercourses.
- Comply with the CA and other regulatory, permit, and approval conditions.
- Employ environmentally and economically responsible construction practices in accordance with applicable industry standards.
- Protect riparian areas in proximity to watercourse crossings.
- Maintain the ecosystem function of riparian areas.
- Minimize siltation.
- Maintain wetland function.

- Prevent water pollution/contamination during construction in/near wetlands.

Activity/Concern	Mitigation Measures
Watercourse Crossing Methods	209. To the extent possible, watercourses and wetlands will be crossed using HDD methods.
In-water Work Timing Conditions	210. In-water work for coldwater habitats is typically permitted from July 15 to September 1 (no work from September 2 to July 14) (MNRF 2013). Consult the Environmental Alignment Sheets (Appendix A) for timing restrictions during an HDD.
Permit Conditions	211. Conditions of water crossing permit(s), if applicable, will be adhered to (see Environmental Alignment Sheets in Appendix A for watercourse crossing with permits).
Permit Review	212. CA permits will be reviewed prior to construction with applicable parties and will be kept onsite for the duration of the HDD. Conditions of water crossing permit(s), if applicable, will be followed. The SVCA also has an in-water construction window of June 1st to September 15th.
DFO Requirements	213. DFO's website (http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html) should be consulted immediately prior to construction to confirm that the construction plan is consistent with the most up-to-date list of DFO avoidance measures.
Notification	214. Notifications will be completed in accordance with permits and authorizations issued for the Project.
Watercourse Obstruction	215. Watercourses should not be obstructed in a way that impedes the free movement of water and fish.
Sediment and Erosion Control	216. Prior to removal of the vegetation cover, effective mitigation techniques for ESC should be in place to protect water quality.
	217. Standard ESC measures should be implemented around drill and pipe staging areas.
	218. Disturbance to the area during construction should be limited and grubbing activities should be delayed until immediately prior to grading operations.
	219. Soil exposure should be reduced prior to commencing construction, and the period that soil remains exposed for grading should be limited. Exposed soils surrounding watercourses should be seeded immediately following construction.
	220. Temporary ESC measures should be maintained and kept in place until work within or near a watercourse has been completed and stabilized. Temporary sediment control measures should be removed at the completion of the work but not until permanent erosion control measures have been established.
	221. Where erosion potential is elevated (i.e., steep slopes, coarse textured soils, etc.), secondary and tertiary erosion control measures will be put in place at the discretion of the Environmental Inspector.
Vehicle Crossings	222. Do not ford watercourses. Watercourses will be crossed using existing municipal infrastructure (culverts, bridges, etc.). No new vehicle or equipment crossing structures will be implemented over watercourses during construction.
Environmental Inspection	223. Environmental inspectors should be present during crossing of the watercourses supporting aquatic SAR (see Appendix A). The Environmental inspectors will be present to monitor for accidental mud release into these watercourses during HDD activities.

Activity/Concern	Mitigation Measures
Construction Material Storage	224. Construction material, excess material, construction debris and empty containers should be stored away from watercourses and watercourse banks.
Trenchless Crossings (HDD)	225. Before the installation of the water crossing and the commencement of in-water activity, the Contractor will confirm that necessary equipment and materials, including those necessary for contingency measures are available and onsite.
Trenchless Crossings (HDD) (cont'd)	226. For pipeline crossings conducted using a trenchless crossing method, follow the mitigation measures outlined in TRCA's Horizontal Directional Drill Guidelines (2010; see Appendix C).
Entry/Exist Pit Setbacks	227. Setback distances for the drill entry and exits pits will be established at least 30 m from the bankfull width of aquatic SAR habitat.
Entry/Exist Pit Setbacks	228. Drilling equipment (e.g., drill rig, support equipment, sump) should be set up a minimum of 30 m from the edge of watercourses.
	229. Clearing of vegetation or grading of watercourse banks should not occur within 30 m from the edge of watercourses if possible.
Entry/Exit Pit Containment	230. Install appropriate berms, silt fencing and secondary containment measures (i.e. plastic tarp) around drilling and drilling mud management equipment at both bore entry and bore exit locations to contain operational spills.
	231. Berms or check dams should be installed downslope from drill entry and anticipated exit points to contain the release of drilling mud.
Drill Path Design	232. Alternative drill paths should be evaluated to minimize exposure to challenging soil materials.
	233. Design the HDD so that drilling slurry pressure is minimized, and the drilling rate is reduced in porous materials to minimize the chance of loss of circulation of the drilling slurry.
Drilling	234. Suitable drilling mud tanks or sumps should be installed to prevent contamination of watercourses.
	235. Maintain smooth operation of the drilling string and slurry pumping systems to avoid pressure surges.
	236. Reduce slurry viscosity through appropriate filtering of drilled material to reduce the pressure gradient along the drill path due to frictional effects.
	237. Drilling mud should be maintained in the borehole until the pipeline is installed. This can be facilitated by positioning the entry and exit points in areas with cohesion less soils (e.g., silt-sand zones).
Drilling Mud	238. Bentonite-based drilling mud should be used without the use of additives (except with approval from appropriate regulatory authorities).
Monitoring	239. Fluid volumes, annular pressure and cutting returns should be strictly monitored to safeguard against bore hole plugging and that fluid losses are detected and addressed immediately.
	240. Continually monitor slurry volumes to enable a quick response to indications of lost circulation.
General Drilling Mud Disposal	241. Drilling mud should be disposed in accordance with the appropriate regulatory authority requirements.

Activity/Concern	Mitigation Measures
Drilling Mud Release Contingency Plan: Response Equipment	242. Additional supplies should be maintained on-site, in a readily accessible location, for maintenance and contingency purposes. Prior to construction, adequate quantities of the materials listed below, or comparable substitutions, should be on site to control erosion and sediment deposition: • Sediment control fencing • Sediment control logs (i.e., SiltSoxx™) • Straw bales • Wooden stakes • Sand bags • Water energy dissipater • Filter cloth • Water pumps (including stand-by pumps and sufficient lengths of hose) • Culvert
Drilling Mud Release Contingency Plan: Operation Spills	243. Clean up operational spills daily to prevent mobilization of drilling mud off site during rain events.
Drilling Mud Release Contingency Plan: Drilling Modification	244. If the environment is threatened, fluid pressure will be reduced and operations will be suspended to assess the extent of the release and to implement other possible corrective actions.
Drilling Mud Release Contingency Plan: Drilling Mud Release (Inadvertent Returns) Notification	245. If a release of drilling fluid occurs within a waterway, the Environmental Inspector will notify the Construction Manager or designate and EPCOR will contact the Spills Action Centre, CA, and/or other appropriate agencies immediately and inform them of potential threats to the environment.
Drilling Mud Release Contingency Plan: Drilling Mud Release on Land	246. Immediately contain drilling mud that escapes onto land and transfer it onto an on-site containment system.
	247. Drilling fluid can be removed directly from roadside drainage ditches via vacuum truck, with care taken to remove as little of the existing ditch material and vegetation as possible.
	248. If the amount of drilling fluid from an on-land release does not allow practical collection, the drilling fluid will be diluted with fresh water and removed with a vacuum truck. Steps will be taken (such as berm, silt fence and/or hay bale installation) to prevent silt laden water from escaping the affected area.
Drilling Mud Release Contingency Plan: Drilling Mud Release in a Watercourse	249. When possible, the location of the inadvertent return will be isolated from watercourse flows by: • Installing the sediment control fencing and straw bales or Silt Soxx, extending from the bank immediately upstream of the inadvertent return, into the channel and around the mud to prevent water from flowing over the source or installing a vertical culvert to isolate the release location. • If drilling mud continues to flow from the inadvertent return location and cannot be contained by the silt fence or culvert, EPCOR will employ appropriate measures to remove drilling mud (i.e., extending hydrovac equipment into the isolated area).
	250. Relief holes should be considered along the drill path on the floodplain a minimum of 5 m from the bankfull width to relieve pressure from the in-channel inadvertent return on the approval of the Environmental Inspector.

Activity/Concern	Mitigation Measures
Drilling Mud Release Contingency Plan: Resumption of Drilling	251. After sufficient time has passed, and drilling mud is expected to have formed a seal at the inadvertent return release point, drilling will resume at lower pressures and will maintain suction at the relief hole until confident regular drilling can resume without risk of repeated in-channel release.
	252. Directional drilling will only be resumed if the potential for significant adverse impacts to the environment is low, as determined by the Environmental Inspector, site inspection staff, qualified aquatic specialist/qualified environmental specialist, drilling or geotechnical consultant (if warranted) and the drilling Contractor.
	253. The following measures will progressively be implemented to prevent the further release of drilling mud into the watercourse or onto land, while ensuring adequate containment and control of the previous release: • Appropriate structures, materials, equipment and personnel should be in place and available in the event of a subsequent release of drilling mud; • Reduce drilling mud pressures, if practical; and • Plug fissures/fracture with inert sealers or plugging agents pumped into the drill hole and leave undisturbed for an appropriate period of time whereupon drilling will be resumed. If the sealing agents are not successful, drilling will be suspended and the plan reviewed and revised.
HDD Reclamation	254. Upon completion of the crossing, disturbed areas shall be immediately stabilized until such time that permanent reclamation activities are complete. Permanent reclamation measures to re-establish riparian vegetation and fish habitat shall be implemented as part of backfilling or as soon as possible following completion of construction at the crossing location.
Wetland Crossings	255. Wetlands will be crossed using HDD technology. In addition to the HDD measures outlined in this section, the following recommendations are to be employed: • Construction material, excess material, construction debris and empty containers should be stored away from adjacent wetlands. • TWE area width should be minimized when working within 30 m of wetlands, where practical. • Staging areas should be located at least 30 m away from the edge of wetlands. • Construction dewatering should be discharged to sediment removal basins if discharge to a well-vegetated dry area is not feasible. The sediment removal basin should be located to maximize the distance to the nearest surface water feature and minimize the slope of the surrounding buffer area. The basin should consist of a temporary enclosure constructed with hay bales, silt fence or both.
Open Cut Crossing: Contingency Planning and Permitting	256. The contingency method for HDD crossings is an open cut crossing.
	257. Following finalization of plans, a Self-Assessment should be completed for project-related activities that have the potential to cause serious harm to fish. If it is determined that serious harm is likely to occur because of project-related activities, a Request for Review should be completed and submitted to DFO to determine approvals requirements under the Fisheries Act.
	258. The proposed pipeline will be located within the boundary of the SVCA and MVCA. Permits under Ontario Regulation 169/06 and 164/06, respectively, will be required prior to construction activities in the regulated boundaries.

Activity/Concern	Mitigation Measures
Open Cut Crossing: *In-water Work*	259. If in-water works are required, the work area will be isolated from the remainder of the surface water feature and the following sequence will occur: • Downstream flows will be maintained using dam and pump techniques. • When dewatering the work area, dewatering operations will be managed to prevent erosion and/or release of sediment laden or contaminated water to the waterbody (e.g. settling basin, filter bag, energy dispersion measures). • An isolation/contamination plan will be designed and implemented to isolate temporary in-water work zones and maintain flow around the work zone. • Maintenance of downstream flow will avoid potential upstream flooding and desiccation of downstream aquatic habitat and organisms.
Open Cut Crossing: *Fish Rescue Plan*	260. Prior to dewatering the work zone, fish trapped in the construction area will be collected and moved using capture, handling, and release techniques to reduce harm and stress.
	261. Fish rescue plans will be developed on a site specific basis and implemented by qualified professionals with the appropriate permitting in place (i.e. MNRF Licence to Collect Fish for Scientific Purposes).
Open Cut Crossing: *Pump Screens*	262. The intakes of pumping hoses will be equipped with an appropriate device to avoid entraining and impinging fish (see Measures to Avoid Causing Harm to Fish and Fish Habitat (2013) at the following DFO website http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html).
Open Cut Crossing: *Restoration*	263. Following construction, the bed and banks of the crossing locations will be restored to pre-construction conditions to the extent possible in accordance with environmental permits. Bank slopes will be restored to match existing grades; however, alterations may be made to maintain slope stability and limit future erosion. Exposed banks will be re-vegetated with native plants to provide riparian cover and aid in erosion and sediment control. Stream beds will be restored to maintain slopes and tie in with existing grades. Bed material will be replaced to match pre-construction conditions.

7.6 BACKFILL, HYDROSTATIC TESTING, CLEAN-UP AND RESTORATION

Introduction

The purpose of this Section is to provide mitigation measures during backfill and initial clean-up procedures.

Objectives

The objectives of these environmental protection measures are to:

- Maintain compliance during the hydrostatic tests.
- Return excavated spoil to the trench and restore preconstruction grades along the trench line.
- Control subsurface drainage and potential erosion concerns along the trench line.

Specific Measures

Activity/Concern	Mitigation Measures
Hydrostatic Test Permits and Approvals	264. EPCOR Environment Lead will be responsible for obtaining appropriate approvals and notifications for hydrostatic test water diversion and release (e.g., the water will be withdrawn from sources/waterbodies other than those listed above).
	265. Appropriate testing and treatment measures should be implemented in accordance with applicable regulations related to discharging hydrostatic test water if test water is released into a natural waterbody. If hydrostatic test water is to be discharged onto land, obtain soil chemistry analysis, if required by the appropriate regulatory authority, prior to discharging.
Hydrostatic Test Water Discharge	266. Discharge the water at an acceptable location onsite in a manner that does not cause erosion and does not allow unfiltered or silted water to directly re-enter a watercourse. Collect pigging debris and dispose of at an acceptable location (e.g., landfill).
	267. To reduce the potential for erosion and scouring at dewatering points, energy dissipation techniques should be used. At dewatering points, discharge piping should be free of leaks and should be properly anchored to prevent bouncing or snaking during surging.
	268. Protective measures may include dewatering at low velocities, dissipating water energy by discharging into a filter bag or equivalent and utilizing protective riprap or equivalent.
Hydrostatic Test Water Discharge	269. If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or dewatering discontinued until satisfactory mitigation measures are in place.
	270. To assess the potential for introduction of contaminated water to soils or waterbodies, testing of discharged water should be considered. EPCOR shall consult with contamination experts to determine what testing is necessary for the discharged water and implement a testing program.
	271. Test water which is withdrawn from one drainage basin must not enter surface waters in another drainage basin to prevent inter-basin transfer of aquatic organisms.
Frozen Conditions	272. Segments trenched during frozen conditions should be backfilled prior to spring break-up.
	273. Avoid mixing snow with spoil material during backfill.
Backfilling	274. Prior to backfilling, inspect the trench for wildlife, skids, refuse, welding rods and other debris, and remove if present.
	275. Large clods of soil should be broken-up prior to, or during backfilling.
	276. Backfill the trench without mixing spoil with the topsoil pile. Do not walk machinery on the topsoil pile while backfilling spoil.
	277. To the extent practical, backfill and compact the trench in lifts where no trench crown will be permitted.
	278. After completion of pipe tie-ins, backfill the bell hole and compact the spoil. Backfill and compact the spoil in the reverse order that the material was excavated. A crown may be left to allow for subsidence of the bell hole.
	279. Import additional or replacement backfill, if warranted, from locations approved by the appropriate land authority.

Activity/Concern	Mitigation Measures
Crown	280. Crown deep excavations with remaining spoil to allow for settlement after thawing. In addition, a higher crown on forested lands may be acceptable provided drainage and wildlife are unaffected.
	281. If a crown is left over the trench in wetlands to account for settling of frozen backfill, leave periodic breaks to prevent ponding and restore the preconstruction contours during clean-up the following spring or summer.
Excess Spoil	282. Feather-out excess spoil over the salvaged portion of the construction TWE/ROW on non-forested lands to minimize the creation of a permanent mound for pipelines constructed during non-frozen soil conditions. Excess spoil should not be feathered-out over the salvaged area to an extent that may cause excessive subsidence of the trench.
	283. Should excess soil be generated on-site during construction activities that will require off-site management, or if contaminated soils are suspected (e.g., if observed material contains anthropogenic substances, petroleum hydrocarbons, odours/staining, and debris/waste), representative soil samples should be collected and submitted for chemical analysis to determine management options and appropriate handling and health and safety guidelines.
Permit Conditions	284. Wetlands/watercourses will be restored to a condition consistent with permit conditions.
Scheduling (Non-Frozen Conditions)	285. If clean-up is not practical during the construction year, it should be undertaken in the year following construction, starting in May or June once the soils have sufficiently dried. Interim soil protection measures should be undertaken in sensitive areas to stabilize the ROW for over-wintering.
Landowner Consultation	286. Consult with the landowner through the EPCOR ROW Agent for special environmental concerns before completing reclamation.
Wet Conditions	287. Postpone clean-up activities on wet ground until soils dry out.
Grading	288. Recontour the TWE/ROW and restore the preconstruction grades and drainage channels. Where restoration of the preconstruction grade is not feasible due to risk of failure of fill on slopes, recontour to grades not exceeding 1:3 (rise over run), or as directed by a geotechnical engineer.
Slope Restoration	289. Re-establishing existing contours and drainage upon completion of construction.
Subsoil Compaction (agricultural land)	290. Rip compacted subsoils, temporary access trails and soils damaged during wet weather to a depth of 30 cm (1 foot) prior to topsoil replacement. If soils are moist, postpone ripping until soils dry so that the soils fracture when ripped. Employ a subsoiler plow (e.g., Paratiller) along segments of the construction TWE/ROW where topsoil salvage did not occur and subsoil compaction is severe.
Stony Subsoils	291. Remove stones from disturbed subsoil to achieve equivalence with the surrounding off TWE/ROW subsoil. Also remove stones from the upper 30 cm (1 foot) of the trench and grade spoil that will interfere with topsoil replacement or cultivation (i.e., stones larger than 10 cm [4 inches] in diameter). Dispose of stones at locations approved by the appropriate land/regulatory authority.
Damaged Soils (agricultural land)	292. Disc, till or cultivate ripped subsoils to break up lumps and to smooth the surface. To reduce further compaction, limit discing to what is necessary to break up clods. Till or cultivate fields and severely compacted or rutted areas to loosen compacted soils.

Activity/Concern	Mitigation Measures
Topsoil Testing for SCN (agricultural land)	293. Topsoil imported for cleanup activities should be analyzed for SCN by collecting a composite sample, sending it to a lab for analysis and reviewing results before imported topsoil is placed on the easement. Imported suitable fill (not containing topsoil) or granular materials do not need to be tested for SCN.
Topsoil Replacement	294. Replace topsoil as evenly as possible over areas of the TWE/ROW where topsoil salvage was conducted. Postpone replacing topsoil during wet weather or high winds to prevent damaging soil structure or erosion of topsoil.
Stony Topsoil	295. Remove stones from disturbed topsoil to achieve equivalence with the surrounding off TWE/ROW topsoil. Dispose of stones at locations approved by the landowner or appropriate regulatory authority.
Seed Preparation	296. Create microsites on steep slopes to retain moisture and enhance seed germination success by aligning the final pass of dozers straight up and down the slope.
Track Cleat Imprinting on Droughty Soils	297. Land imprinting may be used as an erosion control and reclamation measure on drought prone non-cultivated lands, as advised by the Environmental Inspector, in situations where other measures, such as straw crimping, are not desirable. Sufficient soil moisture is required for the imprinting to crust over and hold its shape. Soil moisture conditions will be evaluated by the Environmental Inspector to determine the suitability of an area for imprinting.
Track Cleat Imprinting on Steep Slopes	298. As an alternative to straw crimping on slopes, conduct track cleat imprinting following drill seeding or prior to broadcast seeding to provide a rough surface on steep slopes for trapping water in microsites. Conduct track cleat imprinting prior to tackifier/mulch applications or as advised by the Environmental Inspector. Track cleat imprints should be perpendicular to the fall line of the slope and spaced sufficiently to provide uniform coverage of the ground surface.
Revegetation	299. A re-vegetation program appropriate to the land use should be initiated for work areas disturbed during construction.
	300. Reclamation in residential/commercial land areas traversed by the road allowance, should involve seeding (or sodding) the disturbed areas and replacement of ornamental trees and shrubs.
Seeding	301. Seed CA regulated areas with a native seed mix as per SVCA and MVCA permit conditions.
	302. Seed should be applied during an appropriate time of year to allow germination and establishment of vegetation.
Seed Mixes	303. The following criteria are recommended to be taken into consideration when selecting a seed mix for use in natural vegetation areas: • Site specific conditions such as climate, soil types and terrain should be considered. • Only local native species should be included. • A fast-growing seed mixture requiring little or no maintenance should be selected. • Seed mixture should be consistent with the land use of the area. • If no suitable local native seed mix is available but seeding is deemed desirable to promote rapid revegetation of an area, a non-invasive annual nurse crop such as annual ryegrass should be used instead. • Purchased seed should be certified free of weeds.

Activity/Concern	Mitigation Measures
Trees	304. In the event that trees are required to be removed, a tree replacement program should be undertaken, satisfactory to the landowner, and consistent with municipal requirements.
Wetlands	305. Natural recovery is the preferred method of reclamation (i.e., do not seed wetland areas). In areas where invasive species are of significant concern (as indicated by regulatory authorities), or where natural revegetation is not anticipated to be successful, seed wetland areas with an appropriate native seed mix provided by the CA.
Temporary Erosion and Sediment Control	306. Use temporary ESC measures as required to stabilize disturbed areas (see Section 5.2).
Post-Construction	307. Remove sediment barriers that remain after the disturbed area is revegetated and the area is stable.
Post-Construction Monitoring	308. One year following construction, planted vegetation should be inspected for survival, in areas of severe dieback, dead of diseased planted vegetation should be replaced.

8.0 REFERENCES

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APPENDIX A
Environmental Alignment Sheets

APPENDIX B
Typical Drawings

APPENDIX C

TRCA Horizontal Directional Drill Guidelines (2010)

Toronto and Region Conservation for The Living City

HORIZONTAL DIRECTIONAL DRILL GUIDELINES

July 2010

Horizontal Directional Drilling (HDD) is intended to be a less intrusive construction method than the traditional open cut for crossing a watercourse or wetland with a pipe, cable or other underground service. However, there is a possibility of surface (water, riparian, wetland) disturbance if a 'frac-out' (inadvertent release of drilling fluid or a release of sediment laden groundwater into the wetland or watercourse. There is also the potential for sediment laden water or other deleterious substances to enter a surface water feature as the result of grading, drilling excavations, equipment washing, or other construction related activities during directional boring.

Frac-out releases are typically caused by the pressurization of the drill hole beyond the containment capability of the near surface geologic materials (soil and/or rock). Therefore the type and depth of these materials, as well as the drilling pressure, are key factors in preventing and managing frac-outs.

TRCA aims to minimize ecological risk, which is accomplished by effective siting of the project, collection of detailed information to understand environmental constraints/sensitivities, proactive mitigation of potential ecological impacts, environmental monitoring during HDD construction, and detailed contingency measures.

Minimizing Ecological Risk

These guidelines are intended to provide direction to minimize the potential ecological risks associated with HDD for the installation of services under watercourses or wetlands. The preferred order for dealing with potential releases of drilling fluid is first to prevent them from occurring, second to contain them if such an incident occurs, and third is site restoration/remediation.

Sediment entering a surface water feature may result in a temporary increase in turbidity or siltation that can negatively impact aquatic life, by covering spawning/feeding areas and clogging fish gills. These effects may be a violation under the *Conservation Authorities Act*, *Fisheries Act*, or the *Endangered Species Act.*

The proponent needs to indicate whether or not they are using the Department of Fisheries and Oceans Operational Statement for High Pressure Directional Drilling, which can be downloaded from the Operational Statements web site at http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/modernizing-moderniser/epmp-pmpe/index_e.asp. Please ensure that the most recent version of the operational statement is used, as they may be revised periodically. It is the proponent's responsibility to use the most recent version.

Understanding Site Conditions

When designing HDD projects in or around natural areas, such as watercourses and wetlands, it is important to clearly understand the ecological sensitivities and the potential risk of inadvertent releases of sediment or sediment-laden water during HDD operations. This understanding is based upon detailed information, provided by the proponent, on existing site conditions, including a geotechnical study supporting the type of construction methodology proposed, hydrogeology data including shallow groundwater levels, upwellings, seeps and other discharge zones, and all ecological sensitivities that may be at risk from the proposal. The absence of any of this information with respect to the natural heritage features, functions and the construction methodology within the work area reduces TRCA's ability to effectively review the site plans and determine whether the proposed mitigation measures are appropriate

to reduce risks to the natural environment. It is recommended that prior to designing a HDD project within a TRCA regulated area; proponents consult with TRCA staff to scope detailed requirements, particularly natural heritage features and functions, geotechnical requirements, construction timing, etc., for their projects.

A geotechnical report should support the selection of HDD as the technology chosen to install underground servicing through natural heritage features. Similarly, the design details for the HDD should reflect the findings and recommendations in the geotechnical report. The information obtained in the geotechnical report, in terms of stratigraphy, soil material best suited for the bore path, and groundwater levels, are all critical elements in designing a successful project and limiting the risks to the environment. The geotechnical report should also identify any hydrogeologic or surface water constraints the contractor should be aware of during the drilling process, such as artesian groundwater pressure, ground conditions that may limit construction, etc. One key point to consider when obtaining any geotechnical data, is the location of investigative test pits or boreholes in relation to the bore path. Test pits and boreholes should not be located directly on, or extend through, the proposed alignment, as these weak points may serve as conduits where inadvertent fluid returns or frac outs occur. It is recommended that at least a 3 m offset be provided between the boreholes and pipe alignment.

If there are particular ecologically sensitive features or functions that require enhanced protection at the project location, the following alternatives may need to be considered, in order of preference:

- routes along other existing roads or rights-of-way that avoid sensitive areas entirely;
- other alignments (including crossing above a culvert/creek within a road bed, or locating the pipe/cable on a bridge);
- other trenchless construction methods, such as augering, tunneling, pipe ramming, etc.
- or additional mitigation measures to minimize ecological impacts, if HDD is still proposed. This may include installing pressure relief wells to minimize a potential frac-out, isolating the creek in the area of the tunnel alignment, or other mitigation measures during drilling operations.

Detailed Design Requirements
Once the route has been determined, the following information will be required on the detailed site plans:

- the proposed HDD alignment in both plan and profile views;
- borehole data including the stratigraphy in relation to the proposed bore path, and the elevation of groundwater resources;
- the exact location of all watercourses, including accurate surveys of creeks, clearly identifying the location of banks, and bed invert elevations;
- the exact location of all wetlands, including accurate surveys of wetland boundaries as determined by either the MNR or TRCA, wetland invert elevations, the location of standing water, and water elevations;
- an accurate cross-section of the watercourse/wetland at the crossing location in relation to the HDD trajectory;
- all tree/vegetation removals, access points, entry and exit points, erosion and sediment controls, dewatering/depressurization requirements, details for working in the dry, and site restoration;
- if dewatering of work areas is required, additional clarity on water treatment and disposal should be provided on the plans. Please note that all dewatering discharge locations should be located within a well vegetated area, outside of the work area, a minimum of 30 m from a watercourse or wetland;
- confirmation of adequate treatment of any dewatering from the work area prior to release of this water to the environment. Treatment methods should ensure that only clean water be released to

the environment, and that adequate dissipation methods be employed to minimize erosion at the outlet. Contingency methods of treating sediment laden water and details on monitoring the effluent should be provided, in the event that treatment is ineffective at removing suspended clays and silts from the water column. Please note that filterbags are not effective at removing silts and clays.

- all existing/proposed ditches should be clearly identified, so that water conveyance (during rain events, and dewatering) in and around the work site is clearly understood;
- fisheries timing windows must be identified on the plans;
- contingency/mitigation methods for frac outs, or inadvertent returns of drilling fluids
- notes outlining environmental monitoring and reporting.

Environmental Monitoring

An environmental monitor will be required on site during the HDD construction. Notes regarding environmental monitoring need to be provided on the plans. Please note that the environmental monitor should be experienced with an understanding of the ecological objectives and sensitivities of the site, and in identifying/anticipating potential ecological concerns/risks in a proactive manner in an attempt to avoid impacts before they occur. It is our preference that environmental monitors be qualified, in that they have a college or university degree in environmental science or equivalent, and have experience in managing and mitigating environmental issues on construction sites. Information on how environmental monitoring is to be conducted for the project is required, and should be determined in consultation with TRCA staff. A detailed environmental monitoring/contingency plan is requested, and should describe, among other things, the following:

- how potential ecological issues will be identified,
- how often the monitoring is to be undertaken,
- the environmental monitor be on site for the duration of the HDD operation in and adjacent to natural heritage features,
- protocol for how the environmental monitor is to manage situations that are likely to cause environmental damage,
- ability of the environmental monitor to provide advice to the contractor, as needed in the event of emergencies, etc.

Contingency Plans

TRCA will also require that the proponent provide a Contingency Plan to effectively address inadvertent releases of sediment through frac-outs, or other releases of sediment laden water from the project site.

The environmental monitoring and contingency plan should clearly outline the steps that the contractor is to take in the event of a sediment release or other type of spill. The plan should clearly outline the steps involved to mitigate an inadvertent return or frac out after it occurs, and should not rely solely on the contractor to take all necessary steps to minimize the impacts. Ultimately, the responsibility lies with the proponent. The TRCA Enforcement Officer should be contacted immediately if an environmental emergency arises.

Contingency Plans may include the provision of a vacuum truck, or alternative means of containing or cleaning up a sediment release, at the time of construction in sensitive areas. If vacuum trucks are to be utilized, they should be on-site during construction, and be ready to contain any spill, as it occurs, before it enters a surface water feature. If a sediment spill occurs within the watercourse, adequate isolation of the release should be provided to contain the sediment, and the vacuum truck be ready to remove the drilling fluid and any other frac out soil.

Additional measures may include having a supply of products that can be used to stop a frac-out, such as ‘Poly Swell’, or equivalent. All products used on site are to be environmentally safe. Frac mitigation wells may also be considered to relieve drilling pressures.

The Contingency Plan should indicate if, and when, HDD activities are to resume. For example, when mitigation measures have been implemented are deemed to be effective at mitigating potential ecological impacts.

Interrogatory 19:

Reference: Exhibit A, Tab 9, Schedule 1, page 4

Preamble: *"EPCOR's public engagement process was initiated in October 2015. Consultation and correspondence to date can be found in the Environmental Report. Correspondence, meetings and input from interested and affected parties after the date the application was filed will continue to be tracked and considered as consultation is ongoing."*

Questions:

(a) Please provide an update on correspondence, meetings and input associated with the ongoing public engagement process.

Responses:

(a) A summary of public engagement activities after the Environmental Report was issued can be found in the Tables OEB-19-1 and OEB-19-2 below.

Table OEB 19-1: Agency Correspondence

	Correspondent	Date	Type	Subject Matter
1	Municipality of Brockton	July 23, 2018	Council Meeting	Project Overview, Request for Municipal Bylaw and Model Franchise Agreement
2	Municipality of West Grey	July 30, 2018	Council Meeting	Project Overview, Request for Municipal Bylaw and Model Franchise Agreement
3	Township of Chatsworth	August 1, 2018	Council Meeting	Project Overview, Request for Municipal Bylaw and Model Franchise Agreement
4	Bruce Beach Cottagers Association	August 4, 2018	AGM Meeting	Project Overview and response to community questions
5	Municipality of Brockton	August 27, 2018	Council Meeting	Project Overview, Request for Municipal Bylaw and Model Franchise Agreement
6	Grey County	January 17, 2019	Meeting	Project pipeline alignment
7	Bruce County	January 17, 2019	Meeting	Project pipeline alignment

8	Bruce County	March 5, 2019	Meeting	Project pipeline alignment
9	Grey County	March 5, 2019	Meeting	Project pipeline alignment

Table OEB 19-2: Public Correspondence

	Date	Type	Subject Matter
1	July 14, 2018	Email	The correspondent inquired about project timing and connection to the natural gas system.
2	July 13, 2018	Email	The correspondent inquired about the construction methods for home connections.
3	July 15, 2018	Email	The correspondent inquired about a connection to the natural gas system.
4	July 15, 2018	Email	The correspondent inquired about connection to the natural gas system.
5	July 16, 2018	Email	The correspondent inquired about employment opportunities.
6	July 30, 2018	Email	The correspondent inquired about connection to the natural gas system.
7	August 16, 2018	Email	The correspondent inquired about future open houses.
8	September 4, 2018	Email	The correspondent inquired about employment opportunities.
9	September 6, 2018	Email	The correspondent inquired about project timing.
10	September 11, 2018	Email	The correspondent inquired about project timing.
11	September 17, 2018	Email	The correspondent inquired about employment opportunities.
12	September 27, 2018	Email	The correspondent inquired about project timing.
13	November 8, 2018	Email	The correspondent inquired about connection to the natural gas system.

Additionally, ENGLP has sponsored a number of public events in the region including:

- Paisley Blues Festival
- Lucknow Music in the Fields
- Lighthouse Blues Festival
- Kincardine Golf Tournament
- Kincardine Pride

Interrogatory 20:

Reference: Exhibit A, Tab 10, Schedule 1, pages 2

Preamble: *"The Stage 1 Archaeological Assessment determined that portions of the study area meet the criteria for archaeological potential and require further Stage 2 Archaeological Assessment. It is anticipated that the Stage 2 Archaeological Assessment will be limited to only the areas subject to potential construction disturbance, and the specific areas where a Stage 2 Archaeological Assessment is required will be determined once detailed engineering is completed. It is the intent of EPCOR to stay within the previously disturbed road allowance."*

Questions:

(a) Please provide an update on the Stage 2 Archaeological Assessment including any preliminary findings and the date by which it is anticipated to be fully completed.

Responses:

(a) The Stage 2 Archaeological Assessment field work is scheduled to start on May 7th, 2019 (weather permitting). The final report is expected to be completed and submitted to the Saugeen Objiway Nation (SON) and the MTCS by June 1st 2019.

Interrogatory 21:

Reference: Exhibit A, Tab 1, Schedule 2, pages 2 to 6
Exhibit A, Tab 6, Schedule 1, page 1

Preamble: "*EPCOR applied for an order pursuant to section 90 of the OEB Act granting it leave to construct natural gas pipeline facilities in the Southern Bruce Municipalities. The OEB Act permits the OEB, when making an order, to "impose such conditions as it considers proper.*"

Questions:

(a) OEB staff has prepared the following draft Conditions of Approval. If EPCOR does not agree to any of the draft conditions of approval noted below, please identify the specific conditions that Enbridge [sic] disagrees with and explain why. For conditions in respect of which EPCOR would like to recommend changes, please provide the proposed changes and an explanation of the changes.

(b) The application requests a decision from the OEB by May 2019 and anticipates that the project will be completed by November 2021 or approximately 2.5 years later. In addition to the following draft Conditions of Approval, is EPCOR opposed to a condition that requires it to file a project update report with the OEB if the Project is not complete within three years of the date leave of the OEB is granted for the Project? The update report would be required to identify the lengths and locations of pipelines (including stations) constructed to date as well as those pipelines (including stations) that have yet to be constructed. The report would be required to provide a schedule for the completion of the outstanding works including the in-service dates of these works. The report would be required to provide an update on Project actual costs to date versus budget and include a revised total Project cost, if applicable. The OEB would use the report to conduct a review of the status of the Project and its LTC approval

Responses:

(a) Further below is a blacklined version of the certain of the draft Conditions of Approval containing three proposed changes:

- The correction of a typo (the OEB's docket number).

- The deletion of certain reporting requirements related (in Conditions 4 and 5) to project costs. ENGLP understands that inclusion of cost reporting is typical in LTC Conditions of Approval, and helpful to the OEB in order to monitor project costs and explain any cost variances between estimates filed with the LTC and actual capital costs projected to be included in rate base. However, as the OEB is aware, ENGLP is taking the financial risk on the capital cost of the project, based on its Common Infrastructure Plan (CIP) as filed in the competitive process in the South Bruce Expansion Applications. Any capital cost variances over the course of construction will have no impact on revenue requirement. Consequently, the typical capital cost reporting requirements will not yield useful or relevant information for the OEB for the purposes of rate-making in South Bruce.
- The addition of a material qualifier to the certification in Condition 6(a)(v). Given the size of the project, ENGLP believes that inadvertently omitting to obtain a minor approval should not render any senior executive certification false, or violative of the OEB's Conditions of Approval.

Blacklined Draft Conditions

1. EPCOR Natural Gas Limited Partnership (EPCOR) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB-~~2019~~2018-0263 and these Conditions of Approval.

…

4. EPCOR shall advise the OEB of any proposed material change in the project, including but not limited to changes in: OEB-approved construction or restoration procedures, the proposed route, construction schedule ~~and cost~~, the necessary environmental assessment approvals, and all other approvals, permits, licences, certificates and rights required to construct the proposed facilities. Except in an emergency, EPCOR shall not make any such change without prior notice to and written approval of the OEB. In the event of an emergency, the OEB shall be informed immediately after the fact.

…

5. Concurrent with the final monitoring report referred to in Condition 6(b), EPCOR shall file a Post Construction Financial Report, which shall provide a variance analysis of project ~~cost,~~ schedule or ~~and~~ scope ~~compared to the estimates filed in this~~

~~proceeding, including the extent to which the project contingency was utilized. EPCOR shall also file a copy of the Post Construction Financial Report in the proceeding where the actual capital costs of the project are proposed to be included in rate base or any proceeding where EPCOR proposes to start collecting revenues associated with the project, whichever is earlier~~.

…

6(a)(v) Provide a certification by a senior executive of the company, that the company has obtained all other material approvals, permits, licences, and certificates required to construct, operation and maintain the proposed project.

(b) ENGLP does not oppose providing a project update report, as set out in this information request, with the exception of the information noted in the second last sentence of the information request (i.e., the requirement "to provide an update on Project actual costs to date versus budget and include a revised total Project cost, if applicable.") The rationale for eliminating the capital cost information from any project update report is the same as explained in ENGLP's response to Staff-21(a) immediately above.

Interrogatory 1:

Reference: Exhibit A, Tab 9, Schedule 1, paras. 1, 3–5
"Proposed Natural Gas Pipeline to Serve Southern Bruce: Environmental Report", July 16, 2018

Preamble: *"Assessment of alternatives is a core principle of the Environmental Assessment Act, RSO 1990, c E.18 and most environmental assessment processes applicable to pipelines and pipeline project approvals. "Alternatives assessment" in Canada generally includes (i) evaluating impacts on Indigenous rights and interests and (ii) assessing impacts of construction and operation on environmental and cultural heritage features, prior to determining a preferred alternative."*

Questions:

(a) Please provide all evidence that EPCOR and/or its consultant(s) considered and developed — and the results of any and all — assessments of alternative routes, including, but not limited to, (i) evaluating impacts on Indigenous rights and interests and (ii) assessing impacts of route evaluation and selection, construction, and operation on environmental and cultural heritage features.

Responses:

(a) The environmental study and route assessment included the following:

- Phase I: Inventory and mapping of existing conditions; identification of route options.
- Phase II: Identification of a preliminary preferred route.
- Phase III: Confirmation of the route and preparation of this environmental report (ER).

During the process of developing the environmental study and leave to construct application, EPCOR Natural Gas Limited Partnership ("ENGLP" as it is referred to in the application) and its consultants met with Indigenous rights holders to discuss route options and potential impacts to Indigenous rights and interests. Feedback received from Indigenous rights holders did not result in any routing changes. However, feedback was received from the Saugeen Ojibway Nation that resulted in an updated Archaeological Assessment for the Project.

Interrogatory 2:

Reference: Exhibit A, Tab 9, Schedule 1, paras. 1, 3–5

"Proposed Natural Gas Pipeline to Serve Southern Bruce: Environmental Report", July 16, 2018

Preamble: *"Indigenous governments commonly provide proponents of infrastructure and resource development projects with principles and procedures for conducting consultation and accommodation, and similar guidance for archaeological assessment processes on their traditional territories."*

Questions:

(a) Please provide all information on or related to EPCOR's consideration and implementation of the Principles for Proponents working in the Traditional Territories of the Saugeen Ojibway Nation (SON).

(b) Please provide all information on or related to EPCOR's consideration and implementation of SON's Process and Standards for Approval Authorities, Development Proponents and Consultant Archaeologists for Conducting Archaeology within the Traditional Territory of the SON.

Responses:

(a) When engaging the SON, ENGLP considered and implemented the Principles for Proponents as identified and outlined by the SON. ENGLP met with the SON and the principles were reviewed and discussed. In discussions to date, the SON has not indicated any outstanding issues with respect to the consideration and implementation of the Principles for Proponents.

(b) When engaging the SON, ENGLP considered and implemented the Process and Standards for Approval Authorities, Development Proponents and Consultant Archaeologists for Conducting Archaeology within the Traditional Territory of the SON. ENGLP met with the SON and the process and standards were reviewed and discussed. In discussions to date, the SON has not indicated any outstanding issues with respect to the consideration and implementation of SON's Process and Standards for Approval Authorities, Development Proponents and Consultant Archaeologists for Conducting Archaeology within the Traditional Territory of the SON.

Interrogatory 3:

Reference: Exhibit A, Tab 3, Schedules 1 and 7
Exhibit A, Tab 11, Schedule 1

Preamble: *"The majority of First Nations in Ontario do not have access to natural gas, and many First Nations are interested in accessing natural gas for energy cost savings and low-emission heating. The recently enacted Access to Natural Gas Act, 2018, SO 2018, c 15 (Bill 32) provides a framework for regulations to deliver rate protection for consumers or prescribed classes of consumers with respect to costs incurred by natural gas distributors in making a qualifying investment for the purpose of providing access to a natural gas distribution system to those consumers by reducing the rates that would otherwise apply in accordance with the prescribed rules."*

Questions:

(a) What impacts will EPCOR's project have on the provision of natural gas to SON reserve communities and off-reserve members in the region?

(b) What impacts will EPCOR's project have on the cost of natural gas to SON reserve communities and off-reserve members in the region?

Responses:

(a) SON's reserve communities are not within the areas to be served by the current Southern Bruce Project. Off-reserve members that live or have businesses within the project area will have the potential to access natural gas services from ENGLP in the same manner as all other residents and businesses.

(b) As there is no existing distribution system in the area ENGLP is planning to serve, there is no existing price for natural gas in the reserve communities or for off-reserve members in that area.

Interrogatory 4:

Reference: Exhibit A, Tab 11, Schedule 1
Exhibit A, Tab 11, Schedule 2

Questions:

(a) Please describe and provide evidence for how EPCOR determined, interpreted, and applied:

i. its procedural requirements;

ii. the Crown's procedural requirements; and

iii. the Ontario Energy Board's procedural requirements;

in assisting the Crown in fulfilling its duty to consult and accommodate the SON, with all supporting evidence

Responses:

(a) See response to Anwaatin Interrogatory 6.

Interrogatory 5:

Reference: Exhibit A, Tab 11, Schedule 1
Exhibit A, Tab 11, Schedule 2

Questions:

(a) Has EPCOR made plans to or considered entering into a franchise agreement (or similar) with SON with respect to:

i. SON's treaty rights; and

ii. SON's Bruce Peninsula Land Claim, which names, as defendants, the municipalities of South Bruce Peninsula, Northern Bruce Peninsula, Saugeen Shores, Georgian Bluffs and the counties of Bruce and Grey (as well as the federal and provincial governments)?

Responses:

(a)

i. No.

ii. No.

Interrogatory 6:

Reference: Exhibit A, Tab 11, Schedule 1, paras 10–17
Exhibit A, Tab 11, Schedule 2

Preamble: *"On April 19, 2017, EPCOR received correspondence from the Ministry of Energy, Northern Development and Mines (then the Ministry of Energy) (the Ministry) that the duty to consult had been delegated to EPCOR. There was further correspondence between the Ministry and EPCOR on June 20, 2018"*

Questions:

(a) Please describe and provide copies of any and all communications and responses between EPCOR and the Ministry with respect to the delegated duty to consult and accommodate First Nations and Métis communities.

(b) Please indicate whether the Ministry has communicated to EPCOR in respect of whether it is satisfied that Indigenous consultation and accommodation related to the application is sufficient.

Responses:

(a) ENGLP seeks to foster positive and productive relationships with all Indigenous rights-holder groups including First Nations and Métis communities. ENGLP views First Nations and Métis communities as an integral part of the communities in which ENGLP operates. ENGLP works with First Nations and Métis communities to build an understanding of project related interests, ensure regulatory requirements are met, mitigate or avoid project impacts, and provide mutually beneficial opportunities.

On April 19, 2017, ENGLP received correspondence from the Ministry of Environment, representing the Crown, that the duty to consult had been delegated to ENGLP. The following First Nations and Métis communities were included in the MOE's delegation letter:

- Saugeen First Nation
- Chippewas of Nawash Unceded First Nation
- Métis Nation of Ontario - Great Lakes Traditional Territory Consultation Council
- Historic Saugeen Métis

In the MOE's letter to ENGLP clarifying the duty to consult requirements, the Great Lakes Traditional Territory Consultation Council was identified as an additional community that may have an interest in the Project based on Treaty rights. The Métis Nation of Ontario (MNO) also requested that the Georgian Bay Traditional Territory Consultation Committee (GBTTCC) be consulted. The MOE clarified on June 20, 2018 that they would defer to the recommendation of the MNO and that consultation via the MNO with the GBTTCC would suffice.

First Nation and Métis community consultation has been conducted through phone calls, in-person meetings, mail-outs, open houses and email communications. During these engagement activities, ENGLP representatives have provided an overview of the Project, responded to questions and interests, and reviewed input and concerns expressed by First Nations and Métis communities including the SON representing the Saugeen First Nation and the Chippewas of Nawash Unceded First Nation.

ENGLP has retained Stantec Consulting Ltd. (Stantec) to undertake an environmental study of the construction and operation of the natural gas pipeline which meets the intent of the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and facilities in Ontario, 7th Edition* (2016). This report was provided to all identified First Nations and Métis communities included in the MOE's delegation letter and feedback was collected from the First Nations and Métis communities as outlined in Exhibit A, Tab 11, Schedule 1 of the leave to construct application.

ENGLP will continue to engage with all identified First Nations and Métis communities in open and transparent dialogue concerning the Project. ENGLP will continue to offer meaningful opportunities for the exchange of information, responding to inquiries, and hearing and responding to any interests and concerns that may arise, including those related to potential economic and business opportunities.

(b) On May 1, 2019, ENGLP received the letter regarding the sufficiency of ENGLP's activities with respect to the duty to consult from the MENDM. A copy of this letter can be found in the response to OEB Interrogatory 14.

Interrogatory 1:

Reference: Exhibit 1 Tab 1 Schedule 1 Page 5 of 63

Preamble: *"In the Southern Bruce Expansion Decision, the Board granted ESBGI Certificates of Public Convenience and Necessity ("CPCN") for each of the Municipality of Arran- Elderslie (except for the geographic area of the former Township of Arran and the former Village of Tara), the Municipality of Kincardine and the Township of Huron-Kinloss, conditional on the approval of its subsequent leave to construct application."*

Reference: Exhibit A, Tab 2, Schedule 1, page 3

Preamble: *"In order to allow EPCOR to construct the Facilities to serve the Southern Bruce Municipalities, EPCOR also applies under section 8 of the MF Act for limited CPCNs along the mainline route in respect of the County of Bruce, the County of Grey, the Municipality of Brockton, the Municipality of West Grey and the Township of Chatsworth."*

Reference: Exhibit A, Tab 4, Schedule 1, page 3

Preamble: *"For Grey County, EPCOR is seeking an upper-tier CPCN limited to a strip 500 meters to the north and south of the preferred pipeline route. Within Grey County, EPCOR is also seeking limited CPCNs for the Municipality of West Grey and the Township of Chatsworth, in each case a 500 meter-wide strip to the south and north (respectively) of the preferred pipeline route. For Bruce County, EPCOR is seeking an upper tier CPCN covering the areas for which EPCOR already has lower-tier CPCNs (i.e. the Municipality of Arran-Elderslie, the Municipality of Kincardine, and the Township of Huron-Kinloss), along with a narrow strip (500 meters to the north and south, as applicable, of the preferred pipeline route) in the Municipality of Brockton. Within Bruce County, EPCOR is seeking a limited CPCN for the Municipality of Brockton, namely a 500 meter-wide strip to the south and north (as applicable) of the preferred pipeline route."*

Questions:

(a) Please provide metes and bounds information in lots and concessions for those parts of the Municipality of Arran-Elderslie, the Municipality of Kincardine and the Township of Huron- Kinloss that are associated with this leave to construct application.

(b) Please provide metes and bounds information in lots and concessions for those parts of the Municipality of Brockton, the Municipality of West Grey and the Township of Chatsworth that are associated with this leave to construct application.

(c) Please provide metes and bounds information in lots and concessions for those parts of the lower-tier municipalities within the County of Bruce and the County of Grey that are associated with this leave to construct application and not already addressed in other proposed CPCNs

Responses:

(a) As noted in EPCOR Natural Gas Limited Partnership (referred to as ENGLP in its application) application, ENGLP has been granted conditional Certificates of Public Convenience and Necessity (each a "CPCN") for the Municipality of Arran-Elderslie (excepting the areas represented by the former municipalities of Arran and Tara), Kincardine and Huron-Kinloss. Specifying the exact metes and bounds for certain parts of these municipalities is not necessary for the OEB to render its decision regarding ENGLP's application, and is therefore not relevant to this proceeding.

(b) As noted in ENGLP's application, ENGLP has specified that a CPCN is required to cover the areas along a narrow, 500-metre (to the north and south) strip along the pipeline's preferred route, and in ENGLP's view, the specified 500-metre strip, along with the maps included in ENGLP's application, provide more than enough specificity and detail for the OEB to grant the narrow CPCNs requested by ENGLP. In the event that the OEB requires greater specificity or detail, or requires modifications to the pipeline route, ENGLP would be pleased to provide the OEB with information the OEB needs to issue such CPCNs.

(c) ENGLP is not aware of any other lower-tier municipalities within the County of Bruce and the County of Grey that are not addressed in the proposed CPCNs

Interrogatory 2:

Reference: Exhibit A, Tab 2, Schedule 1, page 3

Preamble: *"Pending Board approval, EPCOR will enter into franchise agreements with the County of Bruce, the County of Grey, the Municipality of Arran-Elderslie, the Municipality of Brockton, the Municipality of Kincardine, the Municipality of West Grey, the Township of Chatsworth and the Township of Huron-Kinloss. All proposed franchise agreements are based on the Board's Model Franchise Agreement. The Franchise Agreements with the County of Bruce, the Municipality of Arran-Elderslie, the Municipality of Kincardine, the Municipality of West Grey, the Township of Chatsworth and the Township of Huron-Kinloss have been executed and are attached at Tab 4, Schedule 4. The Franchise Agreements for Grey County and the Municipality of Brockton have been approved and will be executed pending Board approval; the forms of agreement are attached at Tab 4, Schedule 4."*

Question:

(a) Please confirm EPCOR's understanding that the effective date of any franchise agreement will be the later of the date of the Decision and Order issued by the Ontario Energy Board approving a franchise agreement or the date of the 3rd and Final reading of the municipal bylaw approving the franchise agreement.

Response:

(a) ENGLP's view is that the applicable effective date of any franchise agreement depends on the directions provided, if any, by the OEB in the Decision and Order approving the terms of such franchise agreement. In this case, ENGLP believes it would be convenient to have all franchise agreements related to the South Bruce project effective on the same date, but in any event respectfully requests that in its Decision and Order in this proceeding, the OEB indicate whether the effective date of a franchise agreement is the date of the applicable order, the date of the final reading of the applicable by-law, or another date that the OEB determines appropriate.

Interrogatory 3:

Reference: Exhibit A, Tab 3, Schedule 1, page 7

Preamble: *"Subject to OEB approval, construction is scheduled to begin in June 2019. This will allow sufficient time to construct the Project over three summer construction seasons and avoid higher winter construction costs. This construction schedule has been updated from EPCOR's CIP submission to take into account the impact of the delay in approval of a Leave to Construct for the Project which was originally assumed to be August 20188. EPCOR is targeting substantial completion of the Project by December 31, 2021.*

The proposed construction schedule is targeted to begin in June 2019, with natural gas being distributed to Bruce Energy Centre, Chesley and Paisley for the 2019-2020 heating season if Union completes the custody transfer station in November 2019 as originally targeted. Natural gas is expected to be available in Kincardine and Tiverton for the 2020-2021 heating season, and Lucknow, Inverhuron, Point Clark and Lurgan Beach for the 2021-2022 heating season."

Reference: Exhibit A, Tab 6, Schedule 1, page 1

Preamble: *"The proposed construction schedule will start to provide natural gas to residences, business and industrial customers for the 2019-2020 heating season. EPCOR must commence construction by June 2019 to meet the in service date and avoid winter construction. Therefore, EPCOR is requesting that the Board issues a decision for this proceeding by the end of May 2019."*

Questions:

(a) Please provide an update on the expected in-service dates of the various components of the project.

(b) Please provide an update to Table 2 - CIP Customer Forecast (Exhibit A, Tab 7, Schedule 1, page 6) showing details of current estimates of how many of each class of customer (residential, commercial and industrial) EPCOR plans to serve for the 2019-2020 and subsequent heating seasons.

(c) Please provide an update to Table 3 - CIP Throughput Volumes (Exhibit A, Tab 7, Schedule 1, page 7) showing details of current throughput estimates

(d) Please provide an update on the costs forecast for this project since the CIP review process.

(e) What are the scheduling impacts if final approvals of the requested leave to construct, proposed franchise agreements and CPCNs are not received by May 31, 2019 or June 30, 2019?

(f) Please confirm that no construction activities have been commenced and will not commence until the CPCNs have been approved by the OEB and final franchise agreements have been executed by the municipalities

Response:

(a) Please see ENGLP's response to OEB Interrogatory 1a).

(b) Below is an updated forecast of customer connections.

Table Enbridge 3 - 1: Current Customer Estimate

Customer Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Cumulative
Existing Residential	0	1,149	3,237	3,742	4,176	4,349	4,349	4,349	4,349	4,349	34,049
New Residential	0	52	159	215	271	328	384	424	462	469	2,764
Sub Total	**0**	**1,200**	**3,396**	**3,957**	**4,447**	**4,677**	**4,733**	**4,773**	**4,811**	**4,818**	**36,812**
Small Commercial	0	72	215	288	343	359	359	359	359	359	2,713
Medium Commercial	0	14	43	59	67	69	69	69	69	69	528
Large Commercial	0	4	13	16	17	19	19	19	19	19	145
Sub Total	**0**	**89**	**271**	**363**	**427**	**447**	**447**	**447**	**447**	**447**	**3,385**
Small Agricultural	0	0	0	1	2	2	2	2	2	2	13
Industrial and Large Agricultural	2	3	9	11	11	11	11	11	11	11	91
Sub Total	**2**	**3**	**9**	**12**	**13**	**13**	**13**	**13**	**13**	**13**	**104**
Grand Total	**2**	**1,292**	**3,676**	**4,332**	**4,887**	**5,137**	**5,193**	**5,233**	**5,271**	**5,278**	**40,301**

(c) Below is an updated forecast of throughput volumes:

Table Enbridge 3 - 2: Current Throughput Estimates (m^3)

Customer Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Cumulative
Existing Residential	0	1,231,101	4,717,417	7,498,936	8,507,891	9,160,113	9,346,001	9,346,001	9,346,001	9,346,001	68,499,462
New Residential	0	55,842	214,714	386,342	502,038	618,767	735,496	834,664	915,238	961,723	5,224,824
Sub Total	**0**	**1,286,943**	**4,932,131**	**7,885,278**	**9,009,929**	**9,778,880**	**10,081,497**	**10,180,665**	**10,261,239**	**10,307,724**	**73,724,286**
Small Commercial	0	169,414	668,304	1,180,290	1,480,642	1,647,243	1,684,787	1,684,787	1,684,787	1,684,787	11,885,041
Medium Commercial	0	181,658	765,274	1,373,583	1,696,779	1,831,444	1,858,377	1,858,377	1,858,377	1,858,377	13,282,245
Large Commercial	0	137,967	614,432	1,097,433	1,248,803	1,362,330	1,438,015	1,438,015	1,438,015	1,438,015	10,213,025
Sub Total	**0**	**489,039**	**2,048,009**	**3,651,306**	**4,426,224**	**4,841,017**	**4,981,179**	**4,981,179**	**4,981,179**	**4,981,179**	**35,380,312**
Small Agricultural	0	0	0	2,360	7,080	9,440	9,440	9,440	9,440	9,440	56,640
Industrial and Large Agricultural	649,102	23,498,573	24,107,247	24,798,991	24,985,073	24,985,073	25,028,741	25,002,523	24,985,073	24,985,073	223,025,469
Sub Total	**649,102**	**23,498,573**	**24,107,247**	**24,801,351**	**24,992,153**	**24,994,513**	**25,038,181**	**25,011,963**	**24,994,513**	**24,994,513**	**223,082,109**
Grand Total	**649,102**	**25,274,555**	**31,087,387**	**36,337,935**	**38,428,306**	**39,614,410**	**40,100,857**	**40,173,807**	**40,236,931**	**40,283,416**	**332,186,706**

(d) Please see ENGLP's response to OEB Interrogatory 7 d).

(e) Please see response to OEB Interrogatory 5 c).

(f) ENGLP confirms that no construction activities have commenced and it will ensure that material permits and approvals that are required will be obtained in advance of construction activities.

Interrogatory 4:

Reference: EPCOR Application, Exhibit A, Tab 4, Schedule 4
Proposed Franchise Agreements

Preamble: *"4. Duration of Agreement and Renewal Procedures.*

(a) *If the Corporation has not previously received gas distribution services, the rights hereby given and granted shall be for a term of 20 years from the date of final passing of the By- law.*

(b) *At any time within two years prior to the expiration of this Agreement, either party may give notice to the other that it desires to enter into negotiations for a renewed franchise upon such terms and conditions as may be agreed upon. Until such renewal has been settled, the terms and conditions of this Agreement shall continue, notwithstanding the expiration of this Agreement. This shall not preclude either party from applying to the Ontario Energy Board for a renewal of the Agreement pursuant to section 10 of the Municipal Franchises Act."*

Reference: OEB's 2000 Model Franchise Agreement:

Preamble: *"4. Duration of Agreement and Renewal Procedures*

(a) *If the Corporation has not previously received gas distribution services, the rights hereby given and granted shall be for a term of 20 years from the date of final passing of the By- law.*
or

(b) *If the Corporation has previously received gas distribution services, the rights hereby given and granted shall be for a term of 20 years from the date of final passing of the By-law provided that, if during the 20 year term of this Agreement, the Model Franchise Agreement is changed, then on the 7th anniversary and on the 14th anniversary of the date of the passing of the Bylaw, this Agreement shall be deemed to be amended to incorporate any changes in the Model Franchise Agreement in effect on such anniversary dates. Such deemed amendments shall not apply to alter the 20 year term.*

(c) *At any time within two years prior to the expiration of this Agreement, either party may give notice to the other that it desires to enter into negotiations for a renewed franchise upon such terms and conditions as may be agreed upon. Until such renewal has been settled, the terms and conditions of this Agreement shall continue, notwithstanding the expiration of this Agreement. This shall not preclude either party from applying to the Ontario Energy Board for a renewal of the Agreement pursuant to section 10 of the Municipal Franchises Act."*

Questions:

(a) Please confirm EPCOR's understanding that Enbridge Gas (previously Union Gas Limited) has been distributing gas within the following municipalities:

- Municipality of Arran-Elderslie (since 1997)
- Municipality of Brockton (since 1962)
- Township of Chatsworth (since 1962)
- Municipality of West Grey (since 1962)
- County of Bruce (since 1962)
- County of Grey (since 1959)

(b) Please confirm EPCOR's understanding that Enbridge Gas currently holds franchise agreements with and Certificates of Public Convenience and Necessity for each of the municipalities identified in part (a).

(c) Given that consumers within these municipalities have been receiving gas distribution services for several decades, please confirm that clause 4 of the proposed franchise agreements for these municipalities should refer to sub-clause (b) of the 2000 Model Franchise Agreement.

Response:

(a) ENGLP is generally aware that Enbridge Gas may have some infrastructure within the Municipality of Arran-Elderslie, specifically the former Township of Arran and the former Village of Tara. However, ENGLP has not independently verified whether or not this is the case. Regardless, as Enbridge is aware, ENGLP was issued a CPCN for the Municipality of Arran-Elderslie that excludes the former Township of Arran and the former Village of Tara. ENGLP has no knowledge of Enbridge Gas' distribution of gas in the Township of Chatsworth, the Municipality of West Grey, and more generally the County of Bruce and the County of Grey. It is ENGLP's position that the OEB has already decided on matters of geographic territory between Enbridge Gas and ENGLP,

both in the Generic Proceeding on System Expansion and in the decision to award the South Bruce expansion to ENGLP.

(b) ENGLP has not independently verified whether or not Enbridge Gas has franchise agreements and CPCNs with the above municipalities, and it is ENGLP's position that these issues have already been decided by the OEB and it is not relevant for the purposes of this application.

(c) It is ENGLP's position that its proposed franchise agreements are effectively "greenfield" projects such that the option of 4(b) in the OEB's Model Franchise Agreement is not necessary or appropriate. However, if the OEB determines that 4(b) is required and appropriate, then ENGLP will modify its proposed franchise agreements accordingly.

Interrogatory 5:

Reference: EB-2016-0137/0138/0139 Decision and Order dated April 12, 2018, page 12, "4.3 Municipal Franchise Agreements'

Preamble: *"The original applications filed by EPCOR on March 24, 2016 also requested that the OEB approve the terms of their franchise agreements with the South Bruce Municipalities. The form of the franchise agreements filed differs from the 2000 Model Franchise Agreement (MFA) in the following ways:*

- *The proposed franchise agreements contain termination provisions. If EPCOR fails to meet certain milestones dates at various points throughout the regulatory applications and construction, the municipalities have termination rights. The rationale was to ensure that EPCOR is actively pursuing this undertaking in a timely manner.*
- *The proposed franchise agreements provide for the payment of an annual fee by EPCOR to the municipalities following the commencement of operation of the gas system. The annual fee is 1% of gross revenue minus gas supply commodity costs.*
- *The proposed franchise agreements provide for a rebate of the Municipality's portion of any property or similar taxes payable by EPCOR for the first 10 years of operation.*
- *The proposed franchise agreements provide for the assignment of the agreements to a wholly or majority owned subsidiary of EPCOR."*

Questions:

(a) Has EPCOR entered into any side agreements / arrangements with the Southern Bruce Municipalities?

(b) If the answer to (a) is yes, please provide documentation related to these agreements / arrangements.

Response:

(a) ENGLP has no agreements or arrangements with the Southern Bruce Municipalities.

(b) Not applicable.

Interrogatory 6:

Reference: EPCOR Application, Exhibit A, Tab 7, Schedule 1, page 4

Preamble: *"In confirming the economic viability of this project EPCOR is relying on determinations made by the OEB in its Southern Bruce Expansion Decision with respect to an EBO 188 based economic test which is applied to a distribution system expansion."*

Reference: EPCOR Application, Exhibit A, Tab 7, Schedule 1, page 5

Preamble: *"EPCOR proposes that the CIP process, the parameters contemplated therein and the Southern Bruce Expansion Decision have addressed the economic feasibility requirement. The circumstances of this Application are unique in that it is the result of the Southern Bruce Expansion Decision. As a new stand-alone franchise with stand-alone rates, there are no existing customers that will be affected by development of the system, and no cross-subsidization will occur with any other Ontario system, including EPCOR's Aylmer operations."*

Reference: EPCOR Application, Exhibit A, Tab 7, Schedule 1, page 3

Preamble: *"On December 21, 2018 EPCOR received a letter from the Minister of Energy, Northern Development and Mines stating that the South Bruce expansion project will be eligible to receive rate protection associated with Bill 32, Access to Natural Gas Act, 2018."*

Questions:

(a) Was a discounted cash flow analysis in accordance with the parameters laid out in EBO 188 completed for the proposed project? If yes, please provide this analysis.
(b) Please explain EPCOR's position that the rate protection associated with Bill 32 will not result in any cross-subsidization with any other Ontario gas distribution system.

Response:

(a) No.
(b) The intent of ENGLP's statement was to confirm that South Bruce will use stand-alone rates as agreed to during the OEB's competitive process (EB-2016-0137/0138/0139).

Interrogatory 7:

Reference: EPCOR Application, Exhibit A, Tab 7, Schedule 1, page 5

Preamble: *"EPCOR has undertaken consultations with potential customers in the area and is proposing rates with an objective of being competitive so as to encourage conversion. As part of the Board's competitive CIP process, EPCOR is required to take additional risks not common to other utilities including market risk during the rate stability period. Moreover, EPCOR accepts the capital cost risk associated with construction of the facilities contemplated within the framework of the CIP, further ensuring that no customers in either system will have exposure to capital cost overruns from the development of the distribution system."*

Questions:

(a) Please provide details of the additional risks that EPCOR is required to take that are not common to other utilities.
(b) Please describe the provisions in EPCOR's proposed rate design that are intended to make EPCOR's service competitive and to encourage conversion.

Response:

(a) Please see ENGLP's response to OEB Interrogatory 1(a).
(b) The provisions in ENGLP's proposed rate design that are intended to make its service competitive and encourage conversion are properly addressed in ENGLP's rate application (EB-2018-0264) and outside the scope of this Leave to Construct application.

Interrogatory 1:

Reference: ExA/T3/S1/p4, para. 13.

Preamble: *"The evidence indicates that contractual discussions with industrial customers in the service area are expected to conclude prior to construction start."*

Questions:

(a) Have such contractual discussions concluded?
(b) Have contracts been executed?
(c) If contracts have not been executed, do these contracts have to be executed prior to construction?
(d) If discussions have not concluded, please provide a general indication of the outstanding issues in these discussions. Are there outstanding issues related to project costs or other costs to serve and/or anticipated recovery of such costs in EPCOR's rates?
(e) Would the inability to conclude any of the anticipated contracts lead to the cancellation or material alteration of the project? If so, please provide further explanation of the risks to, and potential impacts on, the project.
(f) Is future ratemaking an issue in any of these discussions? If so;
    (i) Please describe the issue(s) and the prognosis for resolution of the issue(s).
    (ii) Please provide a general description of EPCOR's anticipated approach to setting rates for its new service territory, including whether EPCOR anticipates having more than one rate zone (given the multi-part/multi-stage system proposed).

Responses:

(a) No.
(b) No.
(c) ENGLP is targeting to execute these contracts prior to construction.
(d) Outstanding issues include those related to terms of service including rates. ENGLP notes that, within the set of common parameters, project costs have been established in EB-2016-0137/0138/0139.
(e) ENGLP anticipates reaching agreements with the potential industrial customers. As detailed in OEB Interrogatory 1a), ENGLP is assuming certain risks on project viability.
(f) Future rate making is an issue in discussions.
    (i) ENGLP has to recover the cumulative revenue requirement as approved in EB-2016-0138-7/0138/0139. ENGLP anticipates that this issue will be resolved.
    (ii) ENGLP's proposed approach to setting rates is thoroughly addressed in its rates application (EB-2018-0264). ENGLP is proposing one rate zone.

Interrogatory 2:

Reference: ExA/T3/S1/p7, para. 22.

Preamble: "*The evidence indicates that the construction time line for the project has been altered from the 2 year schedule in the Common Infrastructure Plan (CIP) presented by EPCOR in EB-2016-0137/0138/0139 (see page 21, paragraph 15 and page 37) and now contemplates construction over 3 summers, to take into account the impact of the current Leave to Construct approval time-frame expectations*."

Questions:

(a) Has the extended construction schedule increased project costs?
(b) If so;
  (i) Please indicate by how much (in both dollar and percentage terms)?
  (ii) Please confirm that these increased costs will not have an impact on the rates which EPCOR put forward in its CIP and which it has committed to for the Rate Stability Period, or on the capital cost to be included in rates to be set following conclusion of the Rate Stability Period.
  (iii) How does EPCOR propose to manage these increased costs?
  (iv) Have any material aspects of the project's specifications or construction plan been modified in reaction to the extended schedule in order to mitigate these increased costs?

Responses:

(a) Please see ENGLP's response to OEB Interrogatory 11.
  (i) Please see ENGLP's response to OEB Interrogatory 11.
  (ii) Please see ENGLP's response to OEB Interrogatory 11.
  (iii) Please see ENGLP's response to OEB Interrogatory 11.
  (iv) No material aspects of the project's specifications have been modified as a result of the extended schedule. The construction plan has been modified as per the construction schedule as included in ENGLP's response to OEB Interrogatory 1a) in order to mitigate costs.

Interrogatory 3:

Reference: ExA/T7/S1/p2.

Preamble: *"The evidence provides the project costs and key metrics and revenue requirements, which formed the basis for EPCOR's CIP."*

Reference: ExA/T7/pp3-4.

Preamble: *"The evidence addresses the Rate Stability Period and states: Commitments made during the rate stability period transfers [sic] risk relating to the Project and potential revenues to EPCOR if customer attachments do not occur as forecast."*

Reference: ExA/T8/S1/p1, para. 3.

Preamble: *"The evidence states;*

(i) *EPCOR's understanding that Union Gas will file an LTC application with the Board to seek approval to construct its interconnection facilities at Dornoch.*

(ii) *EPCOR will enter into a firm upstream Transportation Agreement approved by the OEB.*

(iii) *EPCOR will submit a gas supply plan with its rate application [EB-2018-0264] which will include storage assets.*

In (then) Union Gas' Application for approval of its proposed M17 Rate to provide EPCOR with service [EB-2018-0244], issues arose as to;

(i) *the allocation (as between EPCOR and existing Union Gas customers) of the costs of upstream reinforcement to serve EPCOR; and*

(ii) *the availability to EPCOR of cost based storage services from Union Gas.*

To the best if IGUA's knowledge these issues remain unresolved.

We understand that gas supply and other upstream costs were excluded from the competing CIPs submitted by EPCOR and Union Gas in EB-2016-0137/0138/0139, and we therefore assume that the costs associated with any such upstream reinforcement or market based storage requirements were not included in the rate commitment made by EPCOR in its CIP.'

Questions:

(b) Please confirm whether our understanding, as recited immediately above, is correct, and if not please provide correction as warranted.

(c) Please indicate to what extent EPCOR's attachments and volume forecasts are sensitive to these upstream reinforcement and storage costs.

(d) If our understanding is correct, and if material additional upstream reinforcement and/or storage costs materialize, will EPCOR seek a change to its Rate Stability Period rate commitment?
(e) Please confirm that Enbridge Gas (EG) has held a reverse open season related to the potential reinforcement. Is EPCOR aware of the results of that reverse open season? If so, please provide any details of which EPCOR is aware.
(f) Based on EPCOR's most current information, when does EPCOR anticipate that an upstream reinforcement by EG will be required to be in service in order to match EPCOR's customer attachment and volume forecasts?
(g) Please provide any update of which EPCOR is aware regarding the EG applications relevant to EPCOR's project:
    (i) Dornoch connection LTC application.
    (ii) Upstream reinforcement LTC application.
    (iii) Rate M17 application.

Responses:

(b) The understanding is correct, subject to update that it is ENGLP's understanding that the transfer station to be built at Dornoch does not require a leave to construction application.
(c) ENGLP has not undertaken a study to confirm to what extent its attachments and volume forecasts are sensitive to upstream reinforcement and storage costs.
(d) ENGLP is not proposing a change to its Rate Stability Period rate commitment if any potential increase in upstream reinforcement and/or storage costs materialize.
(e) ENGLP is not aware if Enbridge Gas has held a reverse open season related to the potential reinforcement.
(f) Enbridge Gas has informed ENGLP that it can provide the necessary gas until 2020.
(g)
    (i) ENGLP understands that Enbridge Gas will not be filing a LTC for the Dornoch connection. Please see ENGLP's response to OEB Interrogatory 5a) for details as to status.
    (ii) ENGLP understands that Enbridge may file its LTC application by June of this year, subject to Enbridge and ENGLP entering into a number of agreements in advance of it filing the LTC, primarily being a Financial Backstopping Agreement, Precedent Agreement and Transportation Services Agreement. The parties are currently negotiating the terms and conditions of those agreements.
    (iii) On February 13, 2019, Enbridge filed a request with the OEB to withdraw its M17 application (EB-2018-0244) indicating that it would address its request for M17 Transportation Service as part of a leave to construct application for the upstream reinforcement of the Owen Sound Line. On February 25, 2019, ENGLP filed correspondence with the OEB opposing such withdrawal. On March 21, 2019, ENGLP met with Enbridge to discuss the M17 rate application. The parties have agreed to continue discussions around the M17 service and its applicability.

Interrogatory 4:

Reference: ExA/T7/S1/p2.

Preamble: *"The evidence provides the project costs and key metrics and revenue requirements, which formed the basis for EPCOR's CIP."*

Reference: ExA/T7/pp3-4.

Preamble: *"The evidence addresses the Rate Stability Period and states: Commitments made during the rate stability period transfers risk relating to the Project and potential revenues to EPCOR if customer attachments do not occur as forecast."*

Reference: ExA/T7/S1/p5, para. 13.

Preamble: The evidence states: *As part of the Board's competitive CIP process, EPCOR is required to take additional risks not common to other utilities including market rusk during the rate stability period*. [Emphasis added.]

Questions:

(a) Please clarify whether EPCOR anticipates that its Rate Stability Period rates would be subject to adjustments for inflation and OEB prescribed cost of capital parameters.
(b) Please confirm that EPCOR's intention is to allocate the $22 million in available provincial gas expansion funding reflected in project costs across its entire customer base (i.e. as an offset to overall project costs and resulting revenue requirement).
(c) Please confirm following conclusion of the Rate Stability Period the risk of lower customer attachments and/or lower volumes than forecast shift back to ratepayers.

Responses:

(a) ENGLP's rate application (EB-2018-0264) addresses issues regarding the rate stability period.
(b) See (a) above. ENGLP can confirm that it is proposing to allocate the $22.0 million in funding against capital costs that service its entire customer base.
(c) ENGLP will file a rate case to address rates following the 10-year rate stability period. It is expected that the utility will transition to traditional cost of service rates at that time.

Interrogatory 5:

Reference: EB-2016-0137/0138/0139 CIP Submission, page 39, paragraph 24. The CIP Submission indicates that collaboration opportunities discussed in the CIP would, if firmed up and yielding operational efficiencies, form part of the LTC.

Question: Please provide an update on the collaboration opportunities discussed in the CIP and their impact, if any, on the LTC application.

Responses:

(a) Please see ENGLP's response to OEB Interrogatory 7(h).