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Waterdown to Finch Project

Proponent's Response to Information Requests on the Waterdown to Finch Pipeline Application

August 2019

Waterdown to Finch Project

Proponent's Response to Information Requests on the Waterdown to Finch Pipeline Application

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ACRONYMS AND ABBREVIATIONS

AIA	Agricultural Impact Assessment
ASCE	American Society Of Civil Engineers
CHVI	Cultural Heritage Value or Interest
CPM	Computational pipeline monitoring
CSA Z662	Canadian Standards Association's Oil and Gas Pipeline Systems Code
DBH	Diameter at breast height
DFO	Fisheries and Oceans Canada
ECRC	Eastern Canada Response Corporation
EFRD	Emergency flow restricting device
EMP	Environmental Management Plans
EOC	Toronto Emergency Operations Centre
EPP	Environmental Protection Plan
ER	Environmental Report
ERM	Environmental Resource Management
ERP	Emergency Response Plan
ESG	Emergency support group
GTA	Greater Toronto Area
HAZID	Hazard identification
HCCC	Haudenosaunee Confederacy Chiefs Council
HCP	Hydrocarbon control practices
HDD	Horizontal directional drilling
HDI	Haudenosaunee Development Institute
HIA	Heritage Impact Assessment
HONI	Hydro One Networks Inc.
HWN	Huron-Wendat Nation
Imperial	Imperial Oil
KP	Kilometer Posting
LPS	Loss Prevention Program
LVP	Low vapour pressure
MCFN	Mississaugas of the Credit First Nation
MENDM	Ministry of Energy, Northern Development and Mines
MLV	Mainline valve

MTCS	Ministry of Tourism, Culture and Sport
MTO	Ministry of Transportation Ontario
NDT	Non-destructive testing
NEC	Niagara Escarpment Commission
OEB	Ontario Energy Board
OIMS	Operations Integrity Management System
OMAFRA	Ontario Ministry of Agriculture, Food and Rural Affairs
OPCC	Ontario Pipeline Coordination Committee
OWES	Ontario Wetland Evaluation System
PBWP	Parkway Belt West Plan
PDM	Pipeline & Distribution Manual
PEO	Professional Engineers of Ontario
PGO	Professional Geoscientists of Ontario
Project	Waterdown to Finch Project
PSW	Provincially significant wetland
PV	Pressure-volume
ROW	Right-of-way
SAR	Species at Risk
SPPL	Sarnia Products Pipeline
TRCA	Toronto and Region Conservation Authority
TSSA	Technical Standards and Safety Authority
TTC	Toronto Transit Commission
TWS	Temporary workspace
UPS	Uninterruptible Power Supplies
URS	URS Canada Inc.

1. VIRTANEN-1

1.1 Information Request

Detailed Description of a "Temporary Work Base"

1.2 Imperial Response

Imperial has discussed with the landowner the requirements of "Temporary Workspace" for the purpose of access across the south east corner of the Subject Land located at 201 Verobeach Blvd. Temporary workspace (TWS) is area that is required for the purposes of construction activities; in this case, the temporary workspace is required for access. Imperial will prepare a temporary workspace lease agreement to present to the landowners for their review. Imperial is planning to access the HONI corridor through the municipal owned land located between two residential properties at 199 and 201 Verobeach Blvd. In order for the construction equipment to access the municipal owned land between these two properties, a portion of the Subject Lands is required for a turning radius associated with these vehicles.

2. VIRTANEN-2

2.1 Information Request

Justification for the need to use the Subject Lands

2.2 Imperial Response

Imperial is planning to install a new pipeline to replace transportation capabilities of its existing pipeline within the Hydro One Networks Inc. ("HONI") corridor. The portion of the HONI corridor behind the Subject Lands at 201 Verobeach Blvd. is landlocked by the Humber River to the west and north and a storm management pond to the east. There is a City of Toronto owned land parcel between 199 Verobeach Blvd. and 201 Verobeach Blvd. that has previously been used to access the HONI corridor. The only viable access to the HONI corridor is through this municipal owned land adjacent to the Subject Lands. To construct an adequate access and turning radius for the construction vehicles and equipment to safely turn onto the municipal owned land, a portion of the Subject Lands is required for temporary workspace.

3. VIRTANEN-3

3.1 Information Request

Specify the nature of activities that are anticipated to be undertaken on the Subject Lands; ie. Storage or staging of materials and if so, what type of materials, vehicular and/or equipment access and if so, what type of vehicle and equipment, etc.

3.2 Imperial Response

The activities proposed on the Subject Lands are vehicular and equipment access to safely turn from Verobeach Blvd. onto the municipal owned land between the residences at 199 and 201 Verobeach Blvd. to reach the construction work area located on the HONI corridor. Table 3-2 below outlines the largest and heaviest vehicles and equipment that are to be used for construction in this area and may require other smaller or lighter vehicles and equipment. Supporting documentation regarding equipment specifications can be found in Appendix 1.

Table 3-1: Vehicles and Equipment to be Used for Construction

Equipment Type	Make	Model	Specifications
Horizontal Directional Drill	Vermeer	D220x300 S	See "Horizontal Directional Drill – Vermeer D100x140 S3" PDF
Horizontal Directional Drill	Vermeer	D100x140	See "Horizontal Directional Drill – Vermeer D100x140 S3" PDF
Hydraulic Excavator	Caterpillar	316E	See "Hydraulic Excavator – CAT 316E" PDF
Hydraulic Excavator	Caterpillar	336D/336D L	See "Hydraulic Excavator – CAT 336D, 336D L" PDF
Pipelayer	Caterpillar	561N	See "Pipelayer – CAT 561N" PDF
Track Type Tracker	Caterpillar	D5K2	See "Track-Type Tractor – CAT D5K2"
Triple-axel Truck with Trailer	N/A	N/A	Total Vehicle Weight Including Load: 53,000 kg Maximum Weight per Axel Group: 11,000 kg
Pickup Truck	N/A	N/A	Total Vehicle Weight Including Load: 10,000 kg Maximum Weight per Axel Group: 2,900 kg

The access required on the Subject Lands will have a geotextile liner installed on the bottom, then gravel placed to level the area and finally matting will be placed on top. Upon completion, this temporary access will be removed and the lands will be restored to pre-construction conditions.

Large and heavy vehicle access will only be required for the initial and final few weeks of construction activity occurring in this area. For the majority of the construction period, equipment access will be reduced and minimized to pickup trucks, fuel trucks, tandem axel trucks and water trucks along the municipal owned lands and Subject Lands.

4. VIRTANEN-4

4.1 Information Request

Project schedule that identifies the start and end dates that the Subject Lands would be impacted.

4.2 Imperial Response

The planned construction timeframe is anticipated to be between Q4 2019 and Q4 2020, and is subject to permitting and regulatory approvals. Construction activity near the Subject Lands is expected to be approximately three to four months. As the appropriate permits and approvals are received, Imperial will be able to provide an update on the proposed start and end date for access to the Subject Lands. If additional time is required for construction, Imperial will notify the landowners of the changes.

5. VIRTANEN-5

5.1 Information Request

Hours of operation and days of the week that work is anticipated to be conducted on or adjacent to the Subject Lands.

5.2 Imperial Response

Imperial plans to restrict work to the hours of 7 a.m. to 7 p.m. from Monday to Saturday in locations that are close to residential areas, or in accordance with local by-laws. If access is required outside of these hours, Imperial will seek appropriate permits and additional notification will be made to the landowner.

6. VIRTANEN-6

6.1 Information Request

Precise area (m^2) of the Subject Lands that would be impacted along with a fully dimensioned plan delineating the portion of the Subject Lands impacted.

6.2 Imperial Response

The area required for the Project is approximately 28 square metres. The Individual Ownership Plan delineating the portion of the Subject Lands affected by the Project has been generated and will include dimensions of the portion required. Imperial will schedule a meeting with the landowner to review the Individual Ownership Plan within the next two months.

7. VIRTANEN-7

7.1 Information Request

Confirmation of mitigation measures that would be implemented for the following anticipated impacts:

a. Noise & Vibration Attenuation;

b. Dust Control;

c. Construction Access/vehicular movements;

d. Tree Preservation Plan to identify Tree Protection and Hoarding;

e. Property remediation as a result of damage to landscaping, trees, etc.; and

f. Property value

7.2 Imperial Response

a. Noise & Vibration Attenuation:

- In general, access will be restricted to the hours of 7 a.m. to 7 p.m. in locations that are close to residential areas, or in accordance with local by-laws. If access is required outside of these hours, Imperial will seek appropriate permits.
- Horizontal directional drilling (HDD) trenchless technology planned within the HONI corridor to the west of the Subject Lands will generally be drilled during normal working hours. If access is required outside of the 7 a.m. to 7 p.m. working hours, Imperial will seek appropriate permits and additional notice will be made to the landowner.
- To reduce the volume of traffic along the right-of-way (ROW), multi-passenger vehicles such as buses and vans will be used to transport workers to and from active construction sites.
- Machinery and equipment will be well maintained and will be fitted with appropriate mufflers that are in good working order.
- A representative will be appointed to liaise with and address potential concerns or complaints of excessive noise and vibration from the public. The representative's contact information will be made available to residents within the vicinity of the Project prior to the start of construction.

b. Dust Control

- During dry and windy conditions, water will be used on the ROW and on access roads to reduce airborne dust.
- During dry and windy conditions, temporary wind screens will be used around piles of loose, fine material.
- During dry and windy conditions, spoil piles containing loose, fine materials or locations of disturbed soils will be wetted.
- Loads will be covered in instances where loose, fine materials are being transported.
- Excessive idling will be discouraged.
- Speed limits will be implemented and enforced along the ROW and access roads.

- To reduce the volume of traffic along the ROW, multi-passenger vehicles such as buses and vans will be used to transport workers to and from active construction sites.
- A Traffic Management Plan will be developed. The Plan will address construction related traffic routing, access locations, access restrictions, speed limits and idling.
- A representative will be appointed to liaise with and address potential concerns or complaints of air quality from the public. The representative's contact information will be made available to residents within the vicinity of the Project prior to the start of construction.

c. Construction Access / vehicular movements

Increased Traffic

- To reduce the volume of traffic along the ROW, multi-passenger vehicles such as buses and vans will be used to transport workers to and from active construction sites.
- Construction teams will use pre-existing ROW, such as utility corridors, where possible, for access.
- A Traffic Management Plan will be developed to address construction-related traffic routing, access locations, access restrictions, speeds and idling.
- Road closures will be managed to minimize the closure time and avoid peak traffic hours.
- Transportation of equipment and materials, as well as road closures, will be communicated by the contractor to the relevant municipality in advance of planned activities.
- Signage will be used to inform of construction activities, road closures, alternative travel routes or the transportation of construction equipment and materials.

Restricted Access to Properties

- A Communication Plan will be in place to inform residents and businesses of any planned work, potential disturbances, service disruptions and any safety precautions that residents and businesses will need to follow. Specifically, construction activities and any disturbances related to the access to properties will be communicated in advance of planned work to confirm that residents, businesses and landowners are aware of activities and potential disturbances.

d. Tree Preservation Plan to identify Tree Protection and Hoarding

- In certain locations along the corridor replacement tree planting will be required within the impacted areas (i.e. in locations of significant woodlands, riparian zones, habitats of species at risk, wetland buffers, etc.)
- Outside of these areas, Imperial will compensate the landowner for the replacement value of the trees removed from the TWS area.
- Trees will be assigned a value based on the Diameter at Breast Height (DBH) and tree health.
- Replacement values will be assigned based on the same or commonly available tree species, with values based on replacement with whips or young lightly branched trees.
- The landowner can purchase replacement trees and replant them where preferred on their respective parcels outside of Imperial's easement. Trees can be replaced within the proposed TWS areas post construction.
- With regards to the Subject Lands, the trees encroaching on to the municipal owned lands to the south, the HONI corridor to the west or onto the proposed TWS area will require

trimming for vehicles and equipment to safely travel to the construction work area on the HONI corridor. The larger tree in the front yard will require trimming and is not expected to be removed at this time. The smaller evergreen located within the proposed TWS area will require removal and a replacement value will be offered to the landowner once assessed.

A temporary safety fence will be erected along the north side of the TWS area required for construction access for the Project, if requested by the landowner.

e. Property remediation as a result of damage to landscaping, tress, etc.

- It is anticipated that Imperial will need to remove a portion of the landowner's fencing along the south side of their parcel and an evergreen tree that is located on the south east corner of the parcel and trimming of the larger tree in the front yard. It is not anticipated at this time that a nearby large maple will need to be removed. Any trees encroaching on to the municipal owned land to the south and on to the HONI corridor to the west will require trimming. Imperial will reclaim the Subject Lands to replace any portion of fence removed for construction and replace any trees that are removed as a result of Imperial's access on the parcel as per response to 7(d) above. The Subject Lands will be replanted to grass and any other damages that may occur will be remedied where possible.
- The ROW and TWS will be reclaimed or restored to natural or pre-construction contours. For developed areas, restoration involves leaving the workspace in a condition suitable to resume urban landscaping. Imperial will restore the Subject Lands to its previous conditions as reasonably possible.

f. Property Value

- Imperial does not believe any adverse effects to property values will occur as the Temporary Workspace required for the Subject Lands is for vehicle and equipment access only; no construction work will occur on the Subject Lands. The vehicle and equipment access through the Subject Lands will be short term.
- Imperial will restore the Subject Lands to its previous conditions post construction, as reasonably possible.

8. CITY OF MISSISAUGA-1.1

8.1 Subject/Topic

Financial Assurance – Corporate Structure of the Applicant, Imperial Oil Limited

8.2 Reference

EB-2019-0007 – Imperial Oil Limited's Leave to Construct Application filed 2019-02-22, Tab 1, Schedule 3, Paragraph 1.

The Applicant, Imperial Oil Limited, states that it is a body corporate duly formed pursuant to the laws of Canada

8.3 Information Request

a. Is Imperial Oil Limited the general partner in the Imperial Oil partnership?

b. If yes, what is Imperial Oil Limited's percentage interest in the Imperial Oil partnership?

c. Identify the other partner or partners in the Imperial Oil partnership.

d. Please clarify if it is the Imperial Oil partnership that operates the downstream business or is it the general partner, Imperial Oil Limited?

Paragraph 2 refers to "Imperial's Sarnia Products Pipeline (SPPL)"

e. What is SPPL's corporate relationship to Imperial Oil Limited?

f. Please confirm that SPPL is either a division of Imperial Oil Limited or a wholly-owned subsidiary?

8.4 Imperial Response

a. Yes, Imperial Oil Limited is the general partner of Imperial Oil (the Partnership).

b. Imperial Oil Limited has a 15 percent interest in the Imperial Oil partnership.

c. Imperial Oil Resources Limited is the other partner in the Imperial Oil partnership and holds 85 percent interest.

d. The Imperial Oil partnership operates the downstream business.

e. The Sarnia Products Pipeline (SPPL) is pipeline infrastructure owned and operated by Imperial Oil (the partnership), and Imperial Oil Limited is the general partner of such partnership.

f. SPPL is pipeline infrastructure owned and operated by Imperial Oil (the partnership), and Imperial Oil Limited is the general partner of such partnership

9. CITY OF MISSISAUGA-1.2

9.1 Subject/Topic

Financial Assurance - Risk Management Program

9.2 Reference

Application, Exhibit F(Land Matters), Tab 1, Schedule 1, Page 1 of 6, Summary of Land Matters, Paragraph 4

"The project corridor crosses six municipalities within 16.52 km crossing through the Municipality of Mississauga."

9.3 Information Request

a. Please outline what insurance coverage Imperial Oil Limited has in place for (i) operational risk and for (ii) construction risk associated with the pipeline? What is covered?

b. What are the corporate deductibles or financial levels of risk retention Imperial Oil retains for each type of insurance? Does Imperial Oil have any fronting arrangements with a particular insurance company? If so, please identify the insurance company? Will Imperial Oil add the City of Mississauga as an additional insured under the insurance program?

c. Does Imperial Oil have specific coverage for environmental impairment or EIL insurance covering spills and/or damage to the environment? If not, is Imperial Oil prepared to indemnify the City of Mississauga for any damage caused by a spill?

d. Describe the insurance arrangements (types of insurance, limits and deductibles) for Imperial Oil's contractors, subcontractors and suppliers?

e. Does Imperial Oil contractually limit the contractors', subcontractors' and suppliers' liability for loss or damage to a financial amount during the construction of the Project?

f. Please confirm that Imperial Oil's insurance program also covers the de-activation of the existing pipeline?

g. Please outline if Imperial Oil has in place an adjusting firm to handle claims? Please forward a copy of these arrangements.

9.4 Imperial Response

a. Imperial carries third-party liability and property insurance appropriate for exposures related to its assets and operations.

b. Imperial does not disclose its deductibles or risk retention. The company carries a AA+ long-term issuer credit rating from S&P Global Ratings indicating a very strong capacity to meet its financial obligations. Imperial selects insurers on a competitive basis that must meet the company's standard requirement of a minimum financial rating of A- from S&P Global Ratings or equivalent. The company evaluates requests for additional insured status on a case by case basis.

c. Under Imperial's third-party liability insurance, coverage is provided for accidental pollution related to environmental exposures.

d. The company's insurance does not cover contractors, subcontractors and suppliers. Imperial employs standard contracts and ensures all contractors have satisfactory insurance coverage for work completed on behalf of the company.

e. Imperial does not anticipate limiting liability for contractors, subcontractors, and suppliers for loss or damage to a financial amount during construction of the Project. However, contractor, subcontractor, and supplier liability limits are determined through contract negotiations and are determined on a case by case basis.

f. Imperial carries third-party liability insurance appropriate for exposures related to the deactivation of the existing pipeline.

g. Imperial has an adjusting firm in place to handle claims as required. The company does not disclose details of these arrangements.

10. CITY OF MISSISSAUGA-2.1

10.1 Subject/Topic

Engineering and Construction - Pipeline Integrity

10.2 Reference

Application, Exhibit A (General), Tab 1, Schedule 3, Page 1 of 3.

Paragraph 2 states: "Operating safely for many decades, Imperial's Sarnia Products Pipeline ("SPPL") is important infrastructure that provides refined products used by households and businesses across the Greater Toronto and Hamilton."

10.3 Information Request

a. What has been the loss experience since the beginning of SPPL's operations? Please provide details (place, date, volume of spill) along with the root cause of pipeline losses.

b. What was the cause of these losses and where did these losses occur? What were some of the root causes for the losses?

c. Did any of these losses damage third party property or impact a watercourse?

d. Does Imperial Oil plan to implement any new risk management measures for the replacement pipeline which differ from the measures from the existing to be de-activated pipeline? If so, please describe.

e. Outline the details of Imperial Oil's plans to prevent pipeline leak detection.

f. Provide details of the location of isolation valves near the Credit River and Etobicoke Creek and any other major water crossings.

10.4 Imperial Response

a. The existing Waterdown to Finch segment of the SPPL has operated safely without incident since installation. In addition to Imperial's ongoing monitoring and maintenance programs, the project to replace the transportation capabilities of this segment is a proactive measure to ensure continued safe and reliable supply for the region.

   There is a separate 10" pipeline that has been deactivated and was previously used as part of the SPPL system between Sarnia and Waterdown that is no longer operational. Prior to deactivation, this segment experienced a release in 1989 where a minor crack associated with the manufacturing process of the existing pipe led to a slow release of refined product. New in-line inspection technologies have been implemented since, allowing for the early detection of such features and proactive repair as part of Imperial's integrity management program.

b. As stated, the Waterdown to Finch segment of the SPPL has operated safely without incident since installation. The release that occurred several decades ago on the now deactivated segment of the SPPL between Sarnia and Waterdown was associated with the manufacturing process of the existing pipe. The release was located in Flamborough Municipality on private agricultural land.

c. As stated, the Waterdown to Finch segment of the SPPL has operated safely without incident since installation. The release that occurred several decades ago on the now deactivated segment of the SPPL between Sarnia and Waterdown impacted third-party property associated with Imperial's easement on private agricultural lands. Imperial worked closely with the landowner and regulators at the time to remediate the site and address concerns by affected stakeholders.

d. The proposed pipeline will feature risk mitigation enhancements including modern manufacturing and welding technology, high-performance protective coating and thicker walls exceeding the recommendations of Canadian Standards Association's Oil and Gas Pipeline Systems Code Z662 (CSA Z662). Valve stations will include vacuum truck connection points on both sides of each isolation valve, allowing for quicker evacuation of product from the pipe section if necessary. In addition, the line will be significantly deeper in sensitive areas, including major watercourses.

e. Imperial has implemented a wide-range of proactive safety and monitoring measures to prevent and detect leaks. These measures apply to both the current and replacement line and include:

- A computerized metering-based leak detection system
- Remote 24/7 monitoring by human controllers with satellite control
- Weekly aerial patrols; portions that cannot be flown are ground patrolled
- Daily ground patrols
- Use of advanced in-line inspection tools which are sent from one end of the line to the other and assess the integrity of the line using the latest inspection technologies (e.g. ultrasound, x-ray, magnetic flux)
- Non-Destructive Testing (NDT) techniques for inspection of weld quality
- Robust Hydrocarbon Control Practices (HCP) including reconciliation of volume along multiple points of the pipeline
- Automated shut-down devices that prevent over-pressurization

f. The locations of isolation valves, including those near the Credit River and Etobicoke Creek and all other major water crossings are provided in Table 10-1 below.

Table 10-1: Mainline Valve Locations

Name	Approximate KP	Watercourse
Waterdown Launcher	0.0	
MLV 216	11.0	
MLV 217	17.2	
MLV 205	32.3	Credit River (KP 32.9)
MLV 218	34.4	
MLV 219	40.6	Etobicoke Creek (KP 44.1)
MLV TBD [1]	~46.6	
Finch Receiver (Finch MLV)	61.9	

[1] Location of the Eglington valve station is currently being negotiated with landowners. Exact location to be confirmed. The valve station will be located at approximately KP 46.6.

11. CITY OF MISSISSAUGA-2.2 (PART 1)

11.1 Subject/Topic

Engineering Construction - Construction Activities

11.2 Reference

Application, Exhibit E (Project), Table 1, Schedule 2.

The existing Imperial Oil easement will be followed as closely as possible to minimize current land uses (Application, Exhibit D (Routing and Environmental), Tab 1, Schedule 1, Page 1 of 2).

"Since the SPPL pipeline is substantially occupied by other pipelines and traverses through the City of Mississauga to the other pipelines and environmentally sensitive areas, watercourses and major municipal roadways, construction activities may impact the cities."

11.3 Information Request

a. Will Imperial Oil need to restrict the flow of water during the winter months when those water dams could exacerbate possible ice damage?

b. For the de-activated pipeline, what processes are in place to ensure maintenance and monitoring occurs to ensure soil stability, slope stabilization, settlement along with the evaluation of any potential impacts to the community?

11.4 Imperial Response

a. Imperial will not restrict the flow of water during the winter months. Significant watercourse crossings will be constructed by HDD trenchless technology. Where a watercourse crossing will be installed using open cut construction, this activity will be conducted under dry or frozen conditions where possible. If open cut construction cannot be scheduled during these times, the watercourse will be dammed and water will be pumped around the dam to maintain continuous flow and avoid net accumulation in the dammed area.

b. As part of Imperial's pipeline integrity program, monitoring of the deactivated pipeline will include regular erosion surveys in all watercourse crossings and aerial and ground patrols to identify potential changes to surface conditions. Cathodic protection will be maintained to protect the pipe from corrosion and nitrogen pressure will be monitored to ensure the integrity of the pipe is not compromised. Imperial will maintain its signage in the right-of-way and continue to engage the neighbouring communities on an ongoing basis.

12. CITY OF MISSISSAUGA-2.2 (PART 2)

12.1 Subject/Topic

Engineering and Construction - Construction Activities

12.2 Reference

Application, Environment Report (Waterdown to Finch Project), Section 7 (Environmental Protection, Management and Contingency Plants), Page 7-3, Erosion and Sediment Control Plan and Contaminated Material Management and Handling Plan

12.3 Information Request

c. Will a contaminated Material Management and Handling Plan and Erosion and Sediment Control Plan by submitted to the City of Mississauga prior to construction?

12.4 Imperial Response

c. Imperial will prepare a Contaminated Material Management and Handling Plan and an Erosion and Sediment Control Plan and will provide them to the City of Mississauga a minimum of 30 days prior to construction.

13. CITY OF MISSISSAUGA-2.2 (PART 3)

13.1 Subject/Topic

Engineering and Construction – Construction Activities

13.2 Reference

Application, Environment Report (Waterdown to Finch Project), Section 6 (Cumulative Effects Assessment), Paragraph 6.3, Project Interactions, Pages 6-3 and 6-4.

13.3 Information Request

d. For construction activities near roadways (including Mississauga's Transitway) and construction activities near the Hurontario LRT, will additional details of the work area be provided to the City of Mississauga for review to ensure there are no adverse impacts to municipal operations?

13.4 Imperial Response

d. Additional details such as the alignment sheet drawings for the area will have information related to the pipeline, construction footprint and access roads proposed for the Project. These drawings will be provided to the City of Mississauga a minimum of 30 days prior to construction.

14. CITY OF MISSISSAUGA-3.1 (PART 1)

14.1 Subject/Topic

Emergency Response and Fire Safety - Spill Prevention and Response Plan

14.2 Reference

Environment Report (Waterdown to Finch Project), Appendix B (Consultation Key Comment and Response Table), Page 11 of 16. Imperial Oil makes reference to "A Spill Prevention and Response Plan" will be developed and implemented for the Project to guide the prevention of spills and response to spills during construction."

14.3 Information Request

a. Will a copy of the updated Spill Prevention and Response Plan be forwarded to the City of Mississauga once completed? Please advise as to the timing and completion of the aforementioned plan.

14.4 Imperial Response

a. The Spill Prevention and Response Plan specific to construction will be provided to the City of Mississauga once completed. Imperial is currently in the process of identifying a construction contractor and will work jointly with the selected company in the coming months to develop the plan to be used for onsite construction activities. The Spill Prevention and Response Plan will be finalized and forwarded a minimum of 30 days prior to the start of construction.

15. CITY OF MISSISSAUGA-3.1 (PART 2)

15.1 Subject/Topic

Emergency Response and Fire Safety - Spill Prevention and Response Plan

15.2 Reference

Imperial Facility – Emergency Response Plan Appendices, High Water Action Plan & Pipeline Spill Response Tactics.

15.3 Request

b. From a risk management perspective, did Imperial Oil consider re-routing the new section of the pipeline outside of the existing pipeline corridor where there is lower density?

c. Explain if Imperial Oil coordinates its emergency response plans with the owners/operators of the other pipelines within the corridor?

d. Will Imperial Oil provide to the City of Mississauga, a Hazard Identification and Risk Assessment for the Project together with proposed mitigation activities for each identified hazard?

e. Has Imperial Oil considered in its Spill Prevention and Response Plan, the potential impact of recent high water events and flooding?

15.4 Imperial Response

b. An extensive route validation and review was conducted during the initial and detailed design phases of the Project, which considered many variables, including population and structure density, land use, environmentally sensitive areas, known archeologically sensitive areas, expected construction impact, and response plans. Further information related to this alternative routing analysis can be found in the Environmental Report, Exhibit D *Route Selection*, Section 1.

c. While each pipeline operator in the corridor maintains a separate emergency response plan, operators often share learnings from events that relate to safe operation of the pipelines. Imperial representatives frequently attend other operators' emergency response drills and Imperial invites other operators to attend its drills to ensure best practices are shared. Potential incidents and observations of concern within the shared corridor are communicated promptly between operators.

d. Imperial will perform a Hazard Identification (HAZID) to identify and develop mitigation strategies for construction activities. These HAZID and mitigation plans will be developed in conjunction with the construction contractor and will inform the Construction Emergency Response Plan (ERP) which will be shared with the City of Mississauga a minimum of 30 days prior to start of construction.

e. In anticipation of and during high water events, Imperial activates its High Water Action Plans, which form part of its Operational Emergency Response Plan. These plans include monitoring of river flows and debris in water crossings where the pipeline may be affected. If warranted, risk mitigation measures may include line shutdown and further escalations. During construction, weather and potential flooding events are closely monitored such that proper proactive measures can be taken to secure equipment and/or stop construction activities if necessary.

16. CITY OF MISSISSAUGA-3.2

16.1 Subject/Topic

Emergency Response and Fire Safety - Emergency Response Plans for Potential Fire Incidents

16.2 Reference

N/A

16.3 Information Request

f. Are there emergency response plans for potential fire incidents? Please provide to the City of Mississauga a copy of these plans

g. Please advise if fire access routes or roadways will be obstructed for any period of time during construction which may affect emergency response.

16.4 Imperial Response

f. Imperial's Specific Contingency Plan: Pipeline Fire document, located in Appendix 2, outlines the actions that would be taken in the event of a pipeline fire. Fire drills are conducted with local personnel on an annual basis to maintain readiness. The emergency response team in Ontario is highly trained, appropriately resourced and ready to respond quickly in the unlikely event of a pipeline emergency.

   Prior to Project construction, Imperial will work with their selected contractor to develop a Spill Prevention and Response Plan and a Construction Emergency Response Plan specific to construction activities. These plans will be provided to the City of Mississauga a minimum of 30 days prior to construction.

g. The Project does not anticipate using or blocking fire access routes or roadways. Imperial will prepare a Traffic Management Plan that will include a provision that, in case of an emergency, site specific additional signage will be required in consultation with the professional traffic engineer of the affected municipality.

17. CITY OF MISSISSAUGA-3.3

17.1 Subject/Topic

Emergency Response and Fire Safety - Training

17.2 Reference

Application, Exhibit H (Record of Consultation – Supporting Documents), Tab 3, Schedule 1, Page 30 or 40.

"In October 2018, Imperial Oil held a three day large scale emergency response exercise that included internal and external participants. The first day of the event comprised of training rotations for participants, which included demonstrations on decontamination, wildfire response, air monitoring systems, resource management technology, field response simulation and a G15 virtual tour of the Humber River."

17.3 Information Request

a. Please provide details of Imperial Oil's emergency/crisis management plan, the list of participants integral to the plan (both within the company and outside consultants), and details of training.

b. Outline Imperial Oil's communication plan, in particular, provide information for plans to coordinate and interface with the City of Mississauga's Emergency Management and Fire Department

c. Please identify if Imperial Oil will have a local response team available in the event of an emergency and whether the local team has received training.

17.4 Imperial Response

a. Imperial has a robust Operational Emergency Response Plan. Further, Imperial is currently reviewing this plan and making updates where appropriate to support the Waterdown to Finch Project. The development of a Spill Prevention and Response Plan will specifically address construction activities. The emergency response team in Ontario is highly trained, appropriately resourced and ready to respond quickly in the unlikely event of a pipeline emergency.

   The plan includes:

   - Immediate response protocols for different scenarios, such as fire, riot, bomb threat, spill, natural disaster and power failure
   - Escalation and notification procedures
   - Protocols for integration with government agencies
   - Setting up of a Unified Command Structure
   - Listing of support resources available (internal and contracted emergency response support)
   - Listing of emergency response equipment inventory and locations
   - Maps and pre-determined access points for emergency response equipment along the entire line
   - Pre-determined control points for placement of booms in watercourses

- Phone numbers for federal, provincial and local agencies in all jurisdictions along the line (e.g. multiple municipalities and conservation authorities)
- Evacuation protocols
- Training requirements for emergency response personnel
- Communication with the community and media

Internal and contracted participants integral to the plan include:

- Local SPPL Operations team based in Waterdown
- Imperial Strike Team – emergency responders from other Imperial operations (e.g. Ontario refineries, Finch Terminal)
- North American Regional Response Team – emergency response personnel from the larger Imperial and ExxonMobil networks. Activated if escalation is required
- Imperial's internal Emergency Support Group (ESG) - crisis management team comprised of corporately-trained technical experts to provide response strategies for a variety of situations including: communication with government, municipality, Indigenous communities and public, supply disruption, natural disaster, industrial hygiene, risk management and health & safety
- Other Imperial support groups such as Corporate Security, Industrial Hygiene and Public Affairs
- QM Environmental (contracted) – Canada-wide recognized response company
- GHD (contracted) – air monitoring, modeling and water sampling service response company
- Eastern Canada Response Corporation (ECRC; contracted) – professional water response services and tactical response capabilities

Emergency response personnel are trained on response procedures in accordance with the SPPL Operational Emergency Response Plan through computer-based training and in-field exercises. Drills are conducted on a regular basis covering different emergency scenarios. Training is tracked and stewarded on an individual basis.

b. Imperial's Specific Contingency Plans: Spill - Low Vapour Pressure Pipeline document is located in Appendix 3 and the asset-specific emergency response plan is located in Appendix 4, which includes contact information and outlines the actions that would be taken in the event of a pipeline incident. In the event of an emergency within the jurisdiction of the City of Mississauga, Imperial would immediately call 911 to alert fire and police services, followed by notifications to 311, public works and the 24-hour spill response line.

c. Imperial has local and regional teams and third-party contractors available to respond in the event of an emergency. There are operations located in North York, Waterdown, Belleville, Nanticoke and Sarnia with employees who have received Incident Command System and emergency response training and could be deployed immediately. Further to its local in-house response capabilities, in the event of an incident, Imperial would immediately activate its third-party contractors, including QM Environmental, GHD and ECRC, and engage its specialized regional response team members from other parts of Canada and the USA.

18. CITY OF MISSISSAUGA-4

18.1 Subject/Topic

Source Water Protection Measures

18.2 Reference

Environmental Report (Waterdown to Finch Project), Section 4.2.3 Groundwater, Pages 4-8.

"In the RSA, groundwater levels within the bedrock are a subdued reflection of the surface topography with regional groundwater flow toward Lake Ontario."

The SPPL intersects with multiple watercourses within the City of Mississauga that all drain into Lake Ontario; the source of the City's drinking water. A release of product form the pipeline poses a serious environmental risk.

18.3 Request

a. Since all of the Region of Peel's storm sewers eventually discharge into the City of Mississauga's storm sewers, will Imperial Oil contact both the City of Mississauga and the Region of Peel at the same time in regard to any potential discharge into any municipal storm sewer system resulting from construction and operational activities?

18.4 Imperial Response

a. During construction and operations, Imperial does not plan to discharge into any municipal storm sewers. If this changes during construction planning, Imperial will contact both the City of Mississauga and the Region of Peel in regard to any potential discharge.

19. CITY OF MISSISSAUGA-5.1 (PART 1)

19.1 Subject/Topic

Real Estate and Land Matters - Easements and Crossing Agreements

19.2 Reference

Application, Exhibit A (General), Tab 1, Schedule 3, Page 3 of 3, paragraph 12:

Exhibit F includes a summary of land matters, negotiations to-date and a description of lands related permits and agreements required and copies of draft agreements to be offered.

Application, Exhibit A (General), Tab 1, Schedule 3, Page 3 of 3, paragraph 15(2):

"Imperial request that the OEB make the following orders:

(2) an order pursuant to section 97 of the *Ontario Energy Board Act* approving the proposed form of easement agreements found in Exhibit F, Tab 1, Schedules 4 and 5."

19.3 Information Request

a. Please advise if Imperial Oil is prepared to establish a "realty protocol" such that City staff are allowed sufficient time to review and respond to Imperial Oil's requests including agreements within an agreed upon timeframe?

b. Please provide a map showing the exact parcels of land owned by the City of Mississauga on which Imperial Oil intends to install the pipeline.

c. Please provide a map showing the exact parcels of land on which Imperial Oil requires temporary access or for temporary use for constructing the pipeline.

19.4 Imperial Response

a. Imperial is prepared to meet with the City of Mississauga to review realty-related requests and establish an agreed upon "realty protocol" that would mutually satisfy the City's resources and timeframes and Imperial's Project timelines.

b. Imperial has previously provided individual crossing drawings for all City of Mississauga roads and Individual Ownership Plans, showing details of the exact parcels of City-owned lands on which Imperial intends to install the pipeline. A meeting occurred on July 30, with the City of Mississauga to discuss specifically the City-owned lands that may require an easement agreement for the pipeline installation. Please see Appendix 5 for an overall reference map that identifies all the parcels.

c. Imperial has previously provided individual crossing drawings to the City of Mississauga for all roads and Individual Ownership Plans, showing details of the exact parcels of City-owned lands on which Imperial requires temporary access or temporary use for constructing the pipeline. A meeting occurred on July 30 with the City of Mississauga to specifically discuss the City-owned lands that may require a Consent to Enter agreement or other permits for the temporary construction activities. Please see Appendix 5 for an overall reference map that identifies all the parcels.

20. CITY OF MISSISSAUGA-5.1 (PART 2)

20.1 Subject/Topic

Real Estate and Land Matters - Easements and Crossing Agreements

20.2 Reference

Application, Exhibit F (General), Tab 1, Schedule 3, (Land-Related Permits and Agreements Required) Page 3 of 5:

Authority	Purpose
City of Mississauga	Public Utilities Coordination Committee (PUCC) Approval Road Crossing/Encroachment Agreement Permanent Easement Access and Remediation Agreement Consent to Enter Agreement Park Access Permit Entrance Permit City-owned Storm Sewage Discharge Permit Utility Crossing Approval

20.3 Information Request

d. Please indicate if Imperial Oil is willing to use the City of Mississauga's standard form of agreement for the agreements listed above.

e. Please confirm whether Imperial Oil is accepting of paying fair market value for access and use of any City of Mississauga's lands and for City staff to prepare the required agreements.

20.4 Imperial Response

d. Imperial is willing to use the City of Mississauga's standard form of agreement for the agreements listed above, subject to Imperial's legal, risk, and construction departments' review and suggested edits to such agreements and approvals. Imperial provided the City with Imperial's standard form of Permanent Easement agreement for reference on July 5, 2019.

e. Imperial has not had any discussions related to compensation or payments for access and use of the City lands for the pipeline installation or temporary construction activities, but is willing to meet with City staff to determine fair compensation for any easement or temporary workspace.
For Imperial's survey activities over the past year, Imperial and the City have agreed upon fair compensation that City staff calculated as part of the required agreements.

21. CITY OF MISSISSAUGA-5.2 (PART 1)

21.1 Subject/Topic

Real Estate and Land Matters - Heritage Assessments

21.2 Reference

Environment Report (Waterdown to Finch Project), Section 5.4.7 (Archaeological Resources) makes reference to "Currently known archaeological sites in the LSA were identified during the Stage 1 Archaeological Assessment".

21.3 Information Request

a. As required pursuant to the City of Mississauga's Official Plan for any development impacting a heritage resource, will Imperial Oil submit to the City a Heritage Impact Assessment (HIA) prior to construction?

21.4 Imperial Response

a. Prior to construction, Imperial will submit a HIA for municipally-listed or designated properties that may be impacted by Project construction. The HIA will be prepared for compliance under the Ontario Heritage Act and for properties within Mississauga the HIA will be completed using the City of Mississauga's HIA guidelines (City of Mississauga 2017).

22. CITY OF MISSISSAUGA-5.2 (PART 2)

22.1 Subject/Topic

Real Estate and Land Matters - Heritage Assessment

22.2 Reference

Environment Report (Waterdown to Finch Project) Section 5.4.8 (Cultural Heritage Resources and Landscapes) and Table 5.4-7

22.3 Information Request

What is Imperial Oil's timing for the submission of the HIA for the City of Mississauga's approval?

22.4 Imperial Response

The HIA will be prepared for submission to the City of Mississauga in Q4 2019.

23. CITY OF TORONTO-1.1

23.1 Subject/Topic

Engineering Matters – Design Construction

23.2 Reference

i. **Imperial Application for Leave to Construct (the "Application"), Exhibit C (Purpose, Need, Proposed Project and Timing), Tab 1, Schedule 1, page 2 of 4.**

Imperial states that infrastructure associated with the new pipeline will include valves and launchers/receivers to launch and receive pipeline inspection tools. Valve design and placement will be in compliance with TSSA requirements and Canadian Standards Association Z662.

ii. **Application, Exhibit E (Project), Tab 1, Schedule 3, pages 1-2.**

Table 3-1 provides the design specifications for the pipe, fittings and associated equipment used to construct the Project, which Imperial states are in compliance with CSA Z662-15. Table 3-2 provides the Class locations along the pipeline alignment.

iii. **Application, Exhibit H (Record of Consultation – Supporting Documents), Tab 1, Schedule 3, page 164 of 167 (email dated January 25, 2019 from Universal Pegasus International to TSSA).**

It is stated that the three main documents that may govern the proposed pipeline project are:

- O. Reg. 210/01: Oil and Gas Pipeline Systems (Technical Standards and Safety Act, 2000, S.O. 2000, c. 16)
- CSA Standard Z662-15 (Oil and Gas Pipeline Systems)
- TSSA FS-238-18 (Oil and Gas Pipeline Systems Code Adoption Document Amendment)

iv. **Canadian Standards Association Standard Z662-15 Oil and Gas Pipeline Systems ("CSA Z662-15")**.This Standard covers the design, construction, operation, and maintenance of oil and gas industry pipeline systems that convey liquid hydrocarbons among other fluids.

Clause 4.22 Requirements for pipelines installed by horizontal directional drilling

Pipelines may be installed by directional drilling provided that

a. A feasibility assessment is made to assess the suitability of subsurface conditions.

b. The drill path is designed with due consideration given to the location and type of all subsurface features influencing installation operations.

c. An assessment is made to determine the risk of accidental release of drilling fluids from the drilling annulus and an appropriate mitigation plan is prepared.

d. For steel pipe, longitudinal stresses during installation do not exceed the specified minimum yield strength of the pipe.

23.3 Information Request

Please provide the following:

a. A copy of the Design Basis Memorandum for the proposed pipeline, including but not limited to the determination of the class locations and associated pipe wall thicknesses, rationalizing any differences between the existing and proposed pipeline.

b. The results of a surge analysis performed (including pressure relief and overpressure protection), to ensure no damage to the pipe in the event of an operating upset condition.

c. The proposed method(s) of leak detection including the expected threshold accuracy for the full range of flow conditions anticipated during operations.

d. The results of the feasibility assessments undertaken to meet the requirements of CSA Z662-16 Clause 4.22, including the determination of longitudinal stresses arising from the pulling through of the pipe and the contingency plan in the event of an inadvertent return of drilling fluid to the surface.

e. Please confirm if a new pumping station will be required, and if so please provide details of the type of motor drive unit being proposed, steps taken for noise attenuation and the provision of a backup electrical supply in the event of a loss of power from the grid.

f. What is the anticipated lifespan of the proposed pipeline?

23.4 Imperial Response

a. A summary of the design basis is outlined below.

- Class locations were determined based on aerial/LiDar structure counts and population density in accordance with CSA Z662-15 and Technical Standards and Safety Authority (TSSA) requirements.
- Pipe wall thickness was determined based on class locations in Ontario, CSA Z662-15 and TSSA requirements, pipe grade and Imperial design practices.

Rationalizations regarding the design differences between the existing and proposed pipeline have not been considered as major technological evolutions that have occurred in installation methods, coatings, monitoring, and maintenance procedures have either rendered older pipeline designs obsolete or inconsistent with current design practices. The new pipeline is designed to meet or exceed applicable codes, specifically CSA Z662-15 and industry standards, and will be manufactured with modern materials and manufacturing processes to increase its strength and durability to support safe and reliable fuels supply for the region.

b. A surge analysis has been conducted based on the selected pipe grade, wall thickness and pressure rating. The results of the analysis show there to be no adverse effects.

c. Imperial has safely operated pipelines in this area for many years utilizing continuous monitoring of pipeline operations and endeavours to reduce inadvertent releases to the lowest practical level through application of good design and operational practices. Specific leak detection practices include:

- A computerized leak detection system that continuously monitors pressure sensors and flow meter input along the line and performs material balance calculations to detect and locate fluid loss
- Routine aerial patrols; portions that cannot be flown are ground patrolled
- Use of advanced in-line inspection tools (i.e. Smart Balls and Smart Pigs) which are sent from one end of the line to the other to confirm both internal and external characteristics of the pipeline, assess the integrity of the line and identify potential repair requirements
- Robust volumetric monitoring, including reconciliation of volumes along the pipeline
- Cathodic protection along protected steel pipe to safeguard against external corrosion

- Pressure relief devices that prevent over-pressurization and automated valves that shut off in case of an unexpected pressure drop

Leak detection on the replacement pipeline will be further enhanced though the installation of additional pressure transmitters at each automated mainline valve station. Operating conditions of the pipeline such as product, pipeline pressure, pipeline temperature and ambient temperature will influence the minimum size of commodity released that can be detected (API RP 1130). Due to the dynamic nature of pipeline operation, the threshold accuracy is not a fixed value through the full range of possible conditions. Imperial's Computational Pipeline Monitoring (CPM) leak detection system will meet the requirement of API RP 1130 and the following release detection thresholds:

i One percent or less within any 24-hour period

ii Five percent of total flow in any 15-minute period

iii Three times the 15-minute deviation threshold, as defined in item (b) above, within any 1-hour period

b. Geotechnical boreholes and investigation are being drilled along the proposed pipeline route with special consideration given to high risk areas. Several boreholes will be drilled at all planned HDD locations with the express intent of evaluating subsurface suitability for HDD. Based on the results of these geotechnical investigations, adjustments either to the route or depth of drill to more favorable conditions are made to increase the likelihood of a successful drill. Through the course of the HDD design process many calculations are performed including longitudinal stress calculations as required by CSA Z662 Clause 4.22. These calculations will be confirmed to be within the limits as outlined in CSA Z662. Imperial is currently drafting an Inadvertent Returns Plan to address the potential for inadvertent returns during drilling activities. This plan will be provided to the City a minimum of 30 days prior to construction.

c. A new pump station is not required for the Project.

d. The longevity of pipeline infrastructure varies based on a number of factors, including design, materials and manufacturing, operating practices and maintenance activities. The Waterdown to Finch segment of the SPPL has operated safely for more than 60 years. The proposed pipeline will use advanced manufacturing and installation methods and will be subject to continued execution of safe operations, robust monitoring and maintenance programs. As a result, Imperial anticipates the proposed pipeline to exceed the lifespan of the existing pipeline.

24. CITY OF TORONTO-1.2

24.1 Subject/Topic

Engineering Matters – Construction and Deactivation Considerations

24.2 Reference

i. Application, Exhibit E (Project), Tab 1, Schedule 1, Page 1

This exhibit describes the proposed Project construction methods, engineering design specifications, testing methodology and procedures, and schedule.

ii. Application, Exhibit E (Project), Tab 1, Schedule 4, Section 4, Pressure Testing

1) This section describes Imperial's proposed hydrostatic pressure testing.

2) The testing will be completed in accordance with Imperial standards and practices and meet the requirements of CSA-Z662-15 Oil and Gas Pipeline System and Technical Standards and Safety Authority (TSSA) – Oil and Gas Pipeline Systems Code Adoption Document Amendment FS-220-16–July 19, 2016 (Province of Ontario).

   a. Sourcing: The hydrotest water will be re-used as much as practical. Water sourcing is planned to be potable water from municipal supplies.

   b. Treatment: The treatment of water prior to or following hydrotest will be evaluated.

   c. Re-use of hydrotest water: The feasibility of re-using hydrotest water will be evaluated. This evaluation will consider the need for transporting and possibly storing hydrotest water between hydrotests.

   d. Discharge: It is proposed to dispose of the hydrotest water into municipal wastewater/sewer system in line with applicable discharge permit requirements.

iii. Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 1, Schedule 3, Page 122 of 164 (Meeting Notes September 13, 2018, Ministry of Natural Resources and Forestry (MNRF) Aurora and Guelph)

It was noted that general noise and traffic concerns were raised in Toronto and Mississauga.

iv. Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 3, Schedule 2, Page 10 of 64 (July 26, 2018 City of Mississauga – Technical Meeting Summary Notes)

Imperial confirmed that HDDs will be conducted continuously, 24 hours a day until the drill is complete…Imperial will need a noise by law exemption and a notification needs to go out within 500m of the noise source at least a month before work starts.

v. Application, Exhibit A (General), Tab 1, Schedule 3, Page 1 of 3, Section 3. Application and Approvals Requested.

To accommodate reliable supply of products throughout this process, the Project involves the construction of the new pipeline while the existing pipeline continues to operate. Once the new pipeline is successfully installed, the existing line will be safely deactivated and the new pipeline will operate in its place.

vi. Application, Exhibit C (Purpose, Need, Proposed Project, and Timing), Tab 1, Schedule 1, Page 2 of 4, para 13.

After the pipeline is installed, the existing SPPL will be purged of product, deactivated and left in place, following all relevant safety and technical standards.

vii. Application, Exhibit G (Indigenous Relations), Tab 1, Schedule 1, page 15 of 22.

Inquiry about deactivation of the existing line. (Imperial Response to Internal Rec. No 724)

The existing line will be cleaned, filled with nitrogen and deactivated in place. Recognizing the congestion of the corridor of other lines and infrastructure, undertaking deactivation will minimize net environmental impacts. Deactivation will take place in accordance with regulatory requirements.

viii. Application, Exhibit H (Record of Consultation - Supporting Documents), Tab 1, Schedule 3, page 130 of 167. Extract from email dated Sept 20 2018, RE: Imperial Waterdown to Finch Project - land inquiry

After the new pipeline is safely installed and operation is switched over, the existing pipeline will be deactivated and left in place. This deactivation will consist of cleaning the line to remove residual hydrocarbon, disconnecting power where appropriate, segmenting the pipeline by removing block valves and installing blind flanges and CP bonding cables, filling the segments with nitrogen to a pressure that can be monitored (e.g. 50 psig), and isolating the ends of the pipeline with blind flanges. Cathodic protection will be maintained to mitigate the potential for corrosion. The deactivation will follow all TSSA requirements as well as CSA Z662 code. Imperial will include the deactivated pipeline as part of the ongoing monitoring program, including both pressure monitoring and as well as visual inspections of the pipeline right of way. If ROW monitoring indicates a potential depth of cover issue, corrective actions will be taken.

Date of de-activation of 10" pipeline:

I haven't been able to confirm the exact date, but the 10" pipeline was de-activated around the 1970s. There would not have been a need to amend the LoC as it was not abandoned, only idling (as per above) in case it is needed in the future.

ix. Application, Exhibit H (Record of Consultation – Supporting Documents), Tab 3, Schedule 2, page 39 of 64, Meeting Summary Notes Sun-Canadian Pipeline Ltd. & Trans-Northern Pipelines Inc.

When asked by LW, RT clarified that Imperial is deactivating existing line, not abandoning it. Upon deactivation, it will be cleaned and then filled with nitrogen.

x. CSA Z662-15, Clause 10.15.1 De activation of piping,

10.15.1.1 Operating companies deactivating piping shall

a. isolate the piping, using blind flanges, weld caps, or blanking plates suitable for the pressure from which the deactivated piping is being isolated;

b. where required, provide a pressure-relief system; and

c. fill the piping with a suitable medium, having regard for the intended duration of the deactivation, the effects of the medium on the integrity of the piping, and the potential consequences of a leak.

10.15.1.2 For deactivated piping, operating companies shall

a. maintain external and internal corrosion control as specified in Clause 9;

b. where considered appropriate, perform other maintenance activities as specified in Clause 10;

c. maintain records as specified in Clauses 9.11 and 10.4; and

d. for piping that is deactivated for more than 18 months, annually confirm the suitability of the deactivation methods used, the corrosion control, and other maintenance activities.

xi. CSA Z662-15, Clause 8 Pressure Testing

8.7.2 …water containing a freezing point depressant, or another appropriate liquid test medium may be used. Where such alternative liquids are used, contingency plans shall be developed to protect the environment in the event of leakage during testing

xii. CSA Z662-15, Clause 10.5.8 Environmental Effects

Operating companies shall establish effective prevention and control measures to maintain the effect of pipeline system operations upon the environment within acceptable levels.

Note: Matters that should be considered include the following:

a. thermal effects, including those on land and water;

b. containment of spills;

c. sensitivity of route and terrain traversed;

d. availability of trained and responsible personnel;

e. control of erosion and restoration of disturbed areas;

f. handling and disposal of toxic substances;

g. protection of vegetation;

h. control of noise;

i. protection of fish and wildlife;

j. aesthetics;

k. adverse effects on public health;

l. inconvenience to the public;

m. location, availability, and operating readiness of appropriate equipment; and

n. re-evaluation of existing measures.

24.3 Information Request

a. Please provide details on how Imperial will establish effective prevention and control measures during its construction activities to minimize construction disturbance and inconvenience to the public, including noise and traffic flow restrictions.

b. The project schedule indicates that hydro testing may occur at a time when ambient temperatures could be low. Please provide details of any freeze depressant additives that would be used and how they will be treated prior to returning the test water to source.

c. Please describe how Imperial intends to detect leaks during hydro testing of the trenched pipeline sections? Will this involve the use of an odorant?

d. Will trenched construction activity, taking place concurrent with existing pipeline operations, require reverse lay or similar techniques to prevent heavy equipment being placed above the existing pressured pipeline? If so, please provide details of the measures to be taken to reduce the risk of external damage to the existing pipeline.

e. It appears that the existing line has previously been deactivated. Please provide the rationale for, and details of, this deactivation and the subsequent reactivation of the line.

f. Imperial has stated that it is deactivating rather than abandoning the existing line and that it will follow all pertinent regulatory requirements. CSA Z662-15 distinguishes between deactivation and abandonment. Please confirm:

   i. The rationale for deactivation versus abandonment.

   ii. Will any sections of the existing line form a part of the new pipeline?

   iii. Is Imperial retaining the option of reactivating the existing line? If so, what are the possible use(s) of the existing line upon reactivation, and what approval(s) would be required for reactivation?

g. What pressure will the nitrogen in the deactivated pipeline be kept at?

24.4 Imperial Response

a. A Traffic Management Plan will be developed prior to construction and will be designed to reduce disturbance to the public. The plan will schedule equipment and material movements during certain times of the day and access work areas in the direction of traffic to limit public inconvenience. All trucks and equipment will have good operating exhaust mufflers and air intake filters. Many of the crossings at watercourses and roads will be drilled to reduce public inconvenience and traffic impact. Imperial will comply with all applicable local by-laws or will seek appropriate permits ahead of construction.

b. When hydrotesting is planned during ambient freeze conditions, appropriate containment or tents will be built over all exposed piping. Heaters will be used to prevent freezing. Additional options to prevent freezing may include using heated fresh water. The use of freeze depressant additives is not planned.

c. During the hydrostatic test, a pressure-volume chart will be used to check pressure changes. The trenched pipeline sections will be hydrotested once the pipeline is installed and backfilled. Pressure drops over time may indicate a leak. The pipeline will be patrolled to visually inspect if there are signs of leakage. Odorant will not be used during hydrotesting or dewatering.

d. Pipeline construction will take place next to existing, operating pipelines. Reverse lay, air bridge and matting techniques will be used to protect the existing pipelines. Pre-construction surveys will locate existing pipelines. Techniques to reduce risk of external damage to existing lines include placing construction mats overtop existing lines, building an "air bridge" with construction mats to make a pathway for equipment to travel over existing lines without direct contact, and "reverse lay" to move equipment around from one side of the ROW to the other and avoid equipment working overtop the existing lines.

e. The existing 12-inch pipeline segment between Waterdown and Finch that is planned to be replaced by the proposed pipeline has been in active status continuously since it was built in the early 1950s. Other segments of the SPPL system, were deactivated several decades ago and are still maintained by Imperial.

f.

i. Once the Waterdown to Finch segment of SPPL has been successfully installed, Imperial will safely deactivate the existing pipeline, which will include:

a. Isolating the existing pipeline segment

b. Removing the fuel product from the pipeline using specialized cleaning instruments and products

c. Disconnecting the pipeline segment

d. Filling the disconnected pipeline with nitrogen to maintain monitoring pressure.

With deactivation, as opposed to abandonment, Imperial will remain responsible for maintaining the integrity of the pipeline in the same manner as its active infrastructure. Deactivation reduces environmental impacts, such as soil stability, slope stabilization and settlement issues, avoids community construction impacts, and minimizes safety risk for other pipelines and infrastructure sharing the right-of-way.

Once deactivated, Imperial will continue to monitor the segment, in a similar manner to its active assets. This involves pressure monitoring and visual inspections of the pipeline right-of-way, including regular erosion surveys at watercourse crossings. Cathodic protection will be maintained to mitigate the potential for corrosion. Imperial will also maintain locating services after the pipeline has been removed from service to ensure utilities are aware of its location as required.

Compliance with standards and regulations:

The deactivation process will follow all provincial regulations and requirements as outlined in the *Technical Standards and Safety Act*, overseen by the TSSA and the CSA Z662 code, a national standard that is adopted within Ontario legislation through O. Reg. 223/01 and Technical Standards and Safety Act, 2000, S.O. 2000, c. 16

CSA Z662 provides specific guidelines related to the deactivation and abandonment of oil and gas pipeline systems.

- Sections 10.15.1.1 (a-c) and 10.15.1.2 (a-d) of CSA Z662 specify the requirements by operating companies when deactivating pipeline assets. Imperial will comply with these requirements when conducting the deactivation process and the supplemental maintenance and reporting requirements.
- Section 10.16 of CSA Z662 outlines the code's requirements for pipeline abandonment. A notable distinction between the two procedures is that abandonment involves leaving the line unpressurized, whereas deactivation involves filling the pipeline segment with a "suitable medium". To deactivate the existing segment, Imperial will use pressurized nitrogen that will be monitored on an ongoing basis.

ii. Imperial plans to tie in the new pipeline into recently installed Finch Avenue and Credit River sections, completed in 2018 and 2019, respectively. The proposed pipeline will only be connected to these segments and will not include any sections of the original pipeline installed in the 1950s.

iii. Imperial does not, at this time, intend to reactivate the existing line once it has been safely deactivated and removed from service. Any operator seeking to reactivate an inactive asset would be required to comply with all governing regulations, safety standards and jurisdictional

requirements. This process would be conducted in accordance with TSSA requirements in addition to any other required approvals.

g. The nitrogen in the deactivated pipeline will be kept at a low pressure of approximately 10-15 psig. The deactivated line is filled with nitrogen to prevent corrosion and to support ongoing integrity monitoring.

25. CITY OF TORONTO-1.3

25.1 Subject/Topic

Engineering Matters – Safety and Integrity Considerations

25.2 Reference

i. Application, Exhibit C (Purpose, Need, Proposed Project, and Timing), Tab 1, Schedule 1, page 1 of 4.

Imperial states that the Waterdown to Finch segment of the Sarnia Pipeline Products Line (SPPL) has operated safely since it was constructed in the mid-1950s…Ongoing maintenance work, known as integrity digs, facilitates continued safe pipeline operations through physical inspection and installation of repair sleeves to reinforce the pipeline. Since 2014, an average of 16 digs have been conducted per year as part of the ongoing integrity dig program.

ii. CSA Z662 -15, Clause 3 Safety and Loss Management Systems

3.1.2 The safety and loss management system shall cover the life cycle of the pipeline system and shall include the following elements:

a) clearly articulated policy and leadership commitment to the development and implementation of the safety and loss management system;

b) an organizational structure with well-defined responsibilities and authorities that supports the effective implementation of the safety and loss management system;

c) a process for the management of resources, including:

   i. the establishment of competency requirements;

   ii. a training program that includes a process for evaluating the effectiveness of the training provided and for maintaining training records; and

   iii. contractor selection and performance monitoring that ensures services are performed in a manner that conforms to the requirements of the safety and loss management system;

d) an internal and external communication process that supports the effective implementation of the safety and loss management system;

e) a document and records management process for the effective implementation of the safety and loss management system, including

   i. procedures for the control and distribution of documents; and

   ii. procedures for the control of records;

f) operational controls, as applicable, for

   i. risk management;

   ii. design, material selection, and procurement;

   iii. construction;

   iv. operations and maintenance;

   v. pipeline system integrity management;

   vi. engineering assessments;

vii. emergency preparedness, response, and recovery;

viii. security management; and

ix. deactivation and abandonment; …

iii. 3.2 Pipeline system integrity management program

The operational controls required by Clause 3.1

.2 f) v) shall be in the form of an integrity management program that addresses the life cycle of the pipeline system.

iv. Clause 3.4 Risk management

The operational control required by Clause 3.1.2 f) i) shall be in the form of a risk management process that identifies, assesses, and manages the hazards and associated risks for the life cycle of the pipeline system. The risk management process shall include the following:

a) risk acceptance criteria;

b) risk assessment, including hazard identification, risk analysis, and risk evaluation;

c) risk control;

d) risk monitoring and review;

e) communication; and

f) documentation.

25.3 Information Request

Please provide the following:

a) A current copy of Imperial's Safety and Loss Management System ("SLMS") program.

b) Documentation setting out the organizational structure, operational controls, assignment of responsibilities and authorities that support the implementation of the above SLMS program for the SPPL system, including the Statement of Leadership commitment required in Clause 3.1.2 (b) of CSA Z662-15. Please also provide any records relating to the stewardship, or program ownership, of the individual elements a) through e) set out in CSA Z662-15 Clause 3.1.2.

c) The results of all audits, whether internal or external, conducted of the SLMS program, including Imperial's response to these audits.

d) A copy of the company‘s Integrity Management Program as required by CSA Z662-15 Clause 3.1.2 (f and v) and Clause 3.2, and details of all audits, whether internal or external, conducted of this Program including Imperial's response.

e) The results obtained from a detailed risk analysis performed on the proposed replacement line indicating where consequence levels may have changed between the existing and proposed pipelines.

f) Please indicate if Imperial will incorporate into its design considerations the proposed changes to class location included in the June 2019 release of CSA Z662 as they relate to HVP product.

g) Imperial has indicated that it has performed a number of integrity digs in recent years on its existing line and implied that remedial action such as sleeving has resulted. Please indicate the threat that prompted these digs (e.g. corrosion or external interference) and where these digs occurred.

h) Does Imperial use corrosion inhibitor and/or drag reducing additives on its existing Sarnia Products Pipeline system? If so does it intend continuing their usage on the proposed pipeline?

25.4 Imperial Response

a. All Imperial operations are managed using a disciplined management framework called the Operations Integrity Management System (OIMS). OIMS elements apply to operating businesses, workforce personnel, designated third parties, facilities and equipment and they cover all the Safety and Loss Management System elements. A copy of Imperial's OIMS Framework is located in Appendix 6.

b. The OIMS requirements and related procedures are found in Imperial's Canada Fuel Operations' Pipeline & Distribution Manual (PDM) for all SPPL employees and contractors to follow. The manual details our processes and behavior-based Loss Prevention Program (LPS). This manual is not available for external review.

c. OIMS assessments are conducted regularly at all Imperial sites by internal assessors who are independent from the operation being assessed. Assessment results are proprietary. They are reviewed with senior management, tracked and stewarded to closure as part of Imperial's stewardship process.

d. Imperial's integrity management program is focused on regular monitoring and inspection of pipelines with an aim to understand and manage the risks associated with pipeline operations consistent with CSA Z662 expectations. This program is not available for external review. A TSSA audit of the SPPL system was conducted in 2018/2019. While the audit report is still in the process of being finalized, no non-conformance issues were communicated to Imperial by the TSSA.

e. Risk analysis results are not shared publically; generally, the proposed pipeline will have a reduced probability and consequence levels as the pipeline will use advanced manufacturing and installation methods and will be installed deeper in sensitive areas. The proposed pipeline will be subject to continued execution of safe operations, robust monitoring and maintenance programs.

f. The SPPL is a refined products pipeline and is considered low vapour pressure (LVP). It will not carry high vapour pressure products. As directed by TSSA, Imperial will design and allocate class locations for the new line to CSA Z662-15. Construction will be in accordance to CSA Z662-19 for LVP product transportation.

g. Imperial has performed a number of integrity digs in recent years to proactively address features associated with the manufacturing process of the existing pipe. The location of these digs is determined by in-line inspection data and therefore not concentrated at any particular geographic location along the pipeline. Specific dig locations within the City of Toronto can be provided upon request.

h. Imperial does not use corrosion inhibitor or drag reducing additives on the existing SPPL.

26. CITY OF TORONTO-1.4

26.1 Subject/Topic

Engineering Matters – Operating Considerations

26.2 Reference

i. **Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 2, Schedule 6, page 12 of 31.**

Imperial states: we remain committed to operating our facilities in an environmentally responsible manner and in compliance with provincial regulations

ii. **Application, Exhibit C (Purpose, Need, Proposed Project, and Timing), Tab 1, Schedule 1, page 1 of 4**

The pipeline is monitored 24 hours a day, 365 days a year through pressure monitoring by a remote control centre.

iii. **Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 2, Schedule 6, page 13 of 31.**

Imperial states:

- Our pipelines are monitored around the clock.
- Skilled workers in a dedicated control centre with access to monitoring tools can remotely shut down the pipeline and dispatch local workers to inspect the pipeline.
- Imperial uses protected steel pipe that is coated to safeguard against external corrosion.
- Cathodic protection, a technique that uses low-voltage electric currents to curb corrosion, works with the coating to protect the pipe from external elements.
- The pipe is buried below ground to protect it from damage.
- Valves are strategically placed along the pipeline path to allow sections of the pipeline to be closed off as needed.
- Automated valves can automatically close if they sense an unexpected pressure drop or be remotely controlled by the operations centre.

iv. **Application, Exhibit G (Indigenous Relations) Tab 1, Schedule 1, page 8 of 22.**

Imperial states: "in the unlikely event of a spill, the line will be shut down immediately. We would implement the Emergency Response Plan, evaluate the hazards and risks, protect people, protect waterways and wildlife, protect property, coordinate the emergency response and clean up the site."

26.3 Information Request

a. Please provide details of the proposed methodology for leak detection.

b. Please provide details of the current guidance provided to Operating Control Centre staff for responding to a possible loss of containment. Please confirm if Imperial follows a 10 minute rule, whereby if Control Operators cannot reconcile their readings and observations within this time period they are empowered to shut down the pipeline.

c. In practice, how quickly can the current line be shut down in an emergency situation? Assuming maximum flow conditions, how much fluid would be released during the reaction time and the time required to close the isolation valves, ignoring any drain down losses.

d. Please provide details of the availability of auxiliary electrical power supply in the event of power loss.

26.4 Imperial Response

a. Imperial has robust monitoring and maintenance programs to protect people and the environment through leak prevention and detection. These practices are in place for the current operating pipeline and will be applied to the new proposed pipeline. Imperial actively monitors the pipeline using non-disruptive technologies, including use of in-line inspection tools and conducting visual inspections to inform repairs as necessary. To further enhance safety and environmental protection, Imperial continues to identify and implement improvements to its assets and operating practices to reflect global industry learnings and the latest advancements in safety and detection technologies. Our safety, monitoring, and preventative maintenance measures include:

   - A computerized leak detection system that continuously monitors pressure sensors and flow meter input along the line and performs material balance calculations to detect and locate fluid loss
   - Routine aerial patrols; portions that cannot be flown are ground patrolled
   - Use of advanced in-line inspection tools (i.e. SmartBalls and Smart Pigs) which are sent from one end of the line to the other to confirm both internal and external characteristics of the pipeline, assess the integrity of the line and identify potential repair requirements
   - Robust volumetric monitoring, including reconciliation of volumes along the pipeline
   - Cathodic protection along protected steel pipe to safeguard against external corrosion
   - Pressure relief devices that prevent over-pressurization and automated valves that shut off in case of an unexpected pressure drop

b. Operating Control Centre staff respond to alarms in accordance with the SPPL Operating Manual. Alarms are sorted into red, yellow and green categories based on priority. Red alarms, such as those related to possible loss of containment, require immediate response from the operator and specific actions are prescribed for each alarm code. Some alarm codes trigger automatic shutdown by the system. Operators are empowered to shut down the pipeline and close the isolation valves as soon as a loss of containment is suspected and are not required to wait 10 minutes.

c. Imperial's current Waterdown to Finch line can be shut down within minutes during an emergency. A shutdown would follow a specific sequence of steps beginning with shutting down the pumps and closing the valves. The maximum release volume during the reaction time and shutdown sequence is estimated to be 160 cubic meters. Note that this estimate assumes both maximum flow conditions and a complete separation of the line across its cross-section. While Imperial is prepared to quickly respond to an emergency, our integrity management, right-of-way monitoring and preventative maintenance programs are focused on continuing to operate safely and with zero volume released.

d. In the event of a power loss from the grid, battery-powered Uninterruptible Power Supplies (UPS) supply auxiliary power to communication equipment and pipeline instrumentation for up to eight hours. Valves can be operated manually if the electric actuator motors are not powered. Valve stations do not share a single electrical supply. Each valve is connected to the grid separately and supplied from different utilities depending on location.

27. CITY OF TORONTO-1.5

27.1 Subject/Topic

Engineering Matters – Valves

27.2 Reference

i. Imperial Application for Leave to Construct (the "Application"), Exhibit C (Purpose, Need, Proposed Project and Timing), Tab 1, Schedule 1, page 2 of 4.

Imperial states that infrastructure associated with the new pipeline will include valves and launchers/receivers to launch and receive pipeline inspection tools. Valve design and placement will be in compliance with TSSA requirements and Canadian Standards Association ("CSA") Z662

ii. CSA Z662 -15, Clause 4.4.1

Isolating valves shall be installed for the purpose of isolating the pipeline for maintenance and for response to operating emergencies.

iii. Clause 4.4 Valve location and spacing

4.4.4 Except as allowed by Clause 4.4.5, in determining the number and spacing of sectionalizing valves to be installed, if any, the company shall perform an engineering assessment that gives consideration to relevant factors, such as,

a. the nature and amount of service fluid released due to repair and maintenance blowdowns, leaks, or ruptures;

b. the time to blowdown or drain down an isolated section…

iv. CSA Z662-15, Clause 4.4.9

For HVP and LVP pipelines, valves shall be installed on both sides of major water crossings and at other locations appropriate for the terrain in order to limit damage from accidental discharge.

Notes:

1) Consideration should be given to the installation of check valves to provide automatic blockage of the pipeline.

2) A major water crossing means a water crossing that in the event of an uncontrolled product release poses a significant risk to the public or the environment

v. CSA Z662-15, Clause 10.9.6.2

Pipeline valves that can be necessary during an emergency shall be inspected and partially operated at least once per calendar year, with a maximum interval of 18 months between such inspections and operations.

vi. CSA Z662-15, Clause 11.26.7 Valves

Valves shall be inspected and serviced whenever necessary. Valves that, during normal operation, are not opened or closed regularly shall be at least partially operated a minimum of once per calendar year, with a maximum interval of 12 months between operations

vii. CSA Z662-15, Clause 11.26.8 Control and safety devices

11.26.8.1 Control and safety devices shall be inspected and tested at least annually to determine that such devices are functioning properly

viii. CSA Z662-15, Annex N.10.5 Consequence reduction

The options that may be used to reduce the consequences associated with failure and damage incidents include the following, as applicable:

a. improved methods for early detection of a service fluid release;

b. improved methods for control and shutdown of the supply sources;

c. improved methods to limit the size of a service fluid release (e.g., reduced spacing of block valves or isolating valves, and the use of remotely operated valves);

d. improved methods for recovery and cleanup of liquid releases…

27.3 Information Request

a. Will shut off or non-return valves be provided on either side of the following watercourses: Berry Creek , West Humber, Main Humber, Emery Creek, Black Creek, Mimico Creek, Elmcrest Creek, and Renforth Creek. If not, please provide the rationale for this.

b. In installing valves within the boundaries of the City of Toronto, is Imperial willing to place shut off valves outside the floodplain and any slope hazards and in areas that do not pose a risk to erosion?

c. Please provide the results of the engineering assessment performed to meet the requirements of CSA Z662-16 Clause 4.4.4 and Clause 4.4.9 referenced above regarding the number and placement of valves.

d. Please specify the planned distance between control valves and the residual volume of liquid that can be expected to spill once the valves are closed if, for example, a break occurs.

27.4 Imperial Response

a. The locations of the proposed mainline valves (MLVs) are shown in Table 27-1 below.

Elmcrest Creek and Renforth Creek are located between MLV 219 and the MLV planned at approximately KP 46.6. Berry Creek, West Humber, Main Humber, Emery Creek, Black Creek, and Mimico Creek are located between the MLV planned at approximately KP 46.6 and the Finch receiver valve. Valve design and placement will be in compliance with TSSA requirements and CSA Z662.

Table 27-1: Proposed Mainline Valve Locations

Name	Approximate KP
Waterdown Launcher	0.0
MLV 216	11.0
MLV 217	17.2
MLV 205	32.3
MLV 218	34.4
MLV 219	40.6
MLV TBD [1]	~46.6
Finch Receiver	61.9

[1] *Location of the Eglington valve station is currently being negotiated with landowners. Exact location to be confirmed. The valve station will be located at approximately KP 46.6.*

b. Imperial plans to install valves within the boundaries of the City of Toronto as indicated above. This was determined through a MLV placement study and supported by an Emergency Flow Restricting Device (EFRD) study. Where possible, Imperial plans to reuse its existing MLV fenced sites. Imperial can confirm that valves will be placed outside of floodplains and areas of hazardous slope.

c. Imperial plans to install valves within the boundaries of the City of Toronto as indicated above. This was determined through a MLV placement study and supported by an EFRD study. These engineering assessments were submitted to the TSSA; valve mechanism and placement will be in compliance with TSSA requirements and CSA Z662.

d. An EFRD study was performed for the proposed pipeline to determine the appropriate number and location of valves in accordance with all TSSA standards and regulations. The planned distance between valves is shown in Table 27-1. The residual volume that may be released after the valves are closed varies based on the location and elevation of the release point. For most segments along the pipeline, the average residual volume that may be released after valves are closed is estimated at 37 m^3. These values do not consider Imperial's ongoing preventative monitoring and maintenance programs, emergency response practices and containment activities that minimize release volumes in the event of an incident.

28. CITY OF TORONTO-2

28.1 Subject/Topic

Financial Assurances

28.2 Reference

i. The *National Energy Board Act* requires federal pipeline operators to maintain a certain level of financial resources after amendments to the statute came into force in 2016 (see for example s. 48.13 of the *National Energy Board Act* and related regulations).

ii. "Safety and Security of Energy Pipelines in Canada: A Report to Ministers", Energy and Mines Ministers' Conference, August 2014, Annex 3, page 60.

https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/www/pdf/publications/emmc/14-0177_Pipeline%20Safety_e.pdf

Under the heading, "Financial capacity requirements", the report states: "Pipeline companies must provide financial assurance demonstrating their capability to respond to leaks and spills under the EPA Part XII.

iii. Cost Impacts of the TransMountain Expansion on Lower Mainland Municipalities, Surrey, Coquitlam, Abbotsford, Burnaby & Township of Langley, pages iv and 5-3.

This report projects an estimated $93 million of additional costs for Lower Mainland municipalities over the next 50 years due to the proposed Transmountain Pipeline and future expected projects.

28.3 Information Request

a. What assurances can Imperial provide that it has insurance in place and/or funds available to compensate municipalities through which its pipeline travels for any/all losses and expenses, direct or indirect, arising from or related to construction or operation of the proposed pipeline, the deactivated pipeline, and spills, including without limitation containment and remediation costs, costs related to any required evacuation, costs to provide drinking water in the event the municipalities' drinking water is compromised, fines and penalties, and costs arising from any pipeline-related third party claims made against the municipalities?

b. Specifically:

   i. Please describe what insurance arrangements Imperial will put in place for its proposed pipeline and deactivated pipeline, including the scope and limit of coverage and deductibles.

   ii. Can municipalities and conservation authorities be added as additional insureds? If not, why? What would be the cost to Imperial of adding municipalities and conservation authorities as additional insureds?

   iii. Will Imperial's insurance coverage limits be based on individual incidents or apply to the sum of all incidents within its system in the coverage period?

   iv. Will Imperial warrant that it will be responsible for any costs or damages, whether arising directly or indirectly from a spill or leak of the proposed pipeline and/or the deactivated pipeline?

   v. Will Imperial commit to maintaining insurance with an insurer whose financial rating is satisfactory to the City of Toronto ("Toronto"), and who has a financial rating of at least A.M. Best A- ?

vi. Will Imperial Oil Limited arrange for wrap-up insurance covering its contractors and subcontractors? If yes, please provide details of Imperial Oil Limited's level of risk attention and limits of commercial coverage placed in the market covering contractors and subcontractors?

vii. Does Imperial Oil Limited contractually limit its contractors' and subcontractors' liability for loss or damage caused to the pipeline during construction? Is there a contractual limitation of liability in the event the contractor or subcontractor causes damage or personal injury to third parties?

viii. Please provide copies of Imperial's insurance policies relating to the construction and operation of the existing and proposed pipelines.

c. Is there a risk that costs associated with a large spill will exceed the insurance coverage Imperial has? If so, what other forms of financial assurances can Imperial identify that it has or will have in place for the duration of the Project and for the duration of the operation of the pipeline to cover costs arising from a possibly large spill?

d. What is Imperial's position on compensation in the event of a pipeline spill not caused by the fault of Imperial?

e. What measures does Imperial have in place to compensate residents, businesses and other third parties in municipalities along the proposed pipeline in the event they need to be evacuated?

f. Is Imperial willing to provide an indemnity to the municipalities through which the pipeline travels, for costs, claims, expenses, etc. they incur as a result of the proposed pipeline or the deactivated pipeline?

g. Does Imperial have any policy or repayment program to reimburse municipalities for the expenses incurred during training and/or emergency response related to the construction or operation of the proposed pipeline? If not, is Imperial is willing to reimburse municipalities for these expenses?

h. Please confirm which corporate entity(s) will arrange for the construction of the proposed pipeline, and which corporate entity(s) will own and operate the proposed pipeline and the deactivated pipeline.

i. Is Imperial willing to guarantee the liabilities of its subsidiaries or related companies that own or operate the proposed pipeline and the deactivated pipeline?

j. Is Imperial willing to commit to paying any workaround costs incurred by the Toronto when Toronto conducts work near or over the proposed new pipe or the deactivated pipe?

k. Is Imperial willing to be solely responsible for any relocation that may be required in the future of its proposed new pipe and/or the deactivated pipe, where one or both conflict with Toronto capital projects?

28.4 Imperial Response

a. General liability insurance, including accidental pollution insurance for environmental related exposures, is maintained by Imperial Oil Limited and its affiliates. Insurers are selected on a competitive basis and must meet the company's standard requirement of a minimum financial rating of A- from S&P Global Ratings or equivalent. Imperial employs standard contracts and ensures all contractors have satisfactory insurance coverage for work completed on behalf of the company. Further, Imperial holds a AA+ long-term issuer credit rating from S&P Global Ratings and has very strong capacity to meet its financial obligations in excess of its insurance coverage.

In the event of specific insurance requests, Imperial will review the request and work with the requesting agency to seek a mutually acceptable resolution for type and evidence of coverage.

Imperial acknowledges there are operational risks inherent in its operating activities, as well as the potential to incur substantial financial liabilities, if those risks are not effectively managed. Accordingly, the company's primary focus is on prevention through proactive maintenance and its rigorous OIMS, which includes robust emergency response capabilities.

b. Specifically:

   i. Imperial carries third-party liability and property insurance appropriate for exposures related to its assets and operations.

   ii. The company evaluates requests for additional insured status as required.

   iii. Imperial carries third-party liability and property insurance appropriate for exposures related to its assets and operations. The company does not disclose details of these arrangements.

   iv. In the unlikely event of incident, Imperial would evaluate costs or damages arising from the proposed pipeline and/or the deactivated pipeline and determine an appropriate course of action.

   v. Imperial selects insurers on a competitive basis that must meet the company's standard requirement of a minimum financial rating of A- from S&P Global Ratings or equivalent.

   vi. The company does not arrange for wrap-up insurance covering its contractors and subcontractors.

   vii. Imperial does not anticipate contractually limiting liability for contractors and subcontractors for loss or damage caused to the pipeline during construction or in the event the contractor or subcontractor causes damage or personal injury to third parties. However, contractor and subcontractor liability limits are determined through contract negotiations and are determined on a case by case basis.

   viii. Imperial does not disclose its specific insurance policies.

c. Imperial holds a AA+ debt rating from S&P Global Ratings and has very strong capacity to meet its financial obligations in excess of its insurance coverage.

d. In the unlikely event of incident, Imperial would evaluate costs or damages arising from the proposed pipeline and/or the deactivated pipeline and determine an appropriate course of action.

e. In the unlikely event of incident, Imperial would evaluate costs or damages arising from the proposed pipeline and determine an appropriate course of action. This may include activation of a claims process for residents, businesses and other third parties as appropriate.

f. In the unlikely event of incident, Imperial would evaluate costs or damages arising from the proposed pipeline and/or the deactivated pipeline and determine an appropriate course of action.

g. In the unlikely event of an incident, Imperial would evaluate costs or damages arising from the proposed pipeline and determine an appropriate course of action. This may include activation of a claims process that would apply to the municipality as appropriate. Imperial will work directly with the City of Toronto to determine reimbursement for training as applicable.

h. Imperial Oil is the entity that will arrange for the construction of the proposed pipeline, and will own and operate the proposed pipeline and the deactivated pipeline. Imperial Oil is a partnership between Imperial Oil Limited and Imperial Oil Resources Limited.

i. The Sarnia Products Pipeline is owned and operated by Imperial Oil. The proposed pipeline will be owned and operated by Imperial Oil.

j. Imperial will evaluate workaround costs incurred by the City of Toronto when Toronto conducts work near or over the proposed new pipe or the deactivated pipe, and in consultation with the City of Toronto, determine costs, if any, to be paid by Imperial and Toronto.

k. Imperial will evaluate the responsibilities for any relocation that may be required in the future of its proposed new pipe and/or the deactivated pipe, and will determine an appropriate course of action in consultation with the City of Toronto.

29. CITY OF TORONTO-3.1

29.1 Subject/Topic

Emergency Response – Information and Coordination for Emergency Preparedness

29.2 Reference

i. **Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 1, Schedule 1, Page 2 of 31, Imperial Internal Rec Number 466.**

Imperial notes that it led participants on a tour of Imperial's emergency response desktop exercise related to a simulated release from pipeline in the Humber River.

ii. **Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 1, Schedule 1, Page 3 of 31, Imperial Internal Rec Number 731.**

Imperial refers to a 3 day large-scale response exercise.

iii. **Application, Exhibit H (Record of Consultations – Supporting Documentation), Tab 1, Schedule 4, page 58 of 128, letter (dated July 25, 2018) from TRCA to Imperial.**

TRCA, as part of its list of major concerns and requirements related to pipeline projects, writes as follows:

7) Development of a watershed-based spills response plan that articulates the impact of a refined fuel product spill on the environment and watercourses, scenario modelling of spill plume under a variety of hydraulic conditions, identification of storm sewers that have direct connections to watercourses and valleys, identification of emergency access points for spill cleanup, identification of storage and staging areas for spill cleanup, timely notification of emergency response and regulatory agencies, timely containment of spills, methods of identifying ecological impacts and restoration strategies among others…."

8) Location of an Emergency Spills Response Team within the Greater Toronto Area that is equipped to deal with a fuel spill in Lake Ontario.

9) Emergency response exercises that include lake-based and wet and severe weather scenarios.

10) Appropriate location of automated shut off valves.

iv. **Imperial Environmental Report ("ER"), Table 5.4-8 (Potential Effect, Key Mitigation Measure and Net Effects of Contamination), p. 5-34.**

Under the heading "Key Mitigation Measures", it states as follows:

a. A Spill Prevention and Response Plan will be developed and implemented for the Project to guide the prevention of spill and response to spills during the Project construction.

b. Imperial's Emergency Response Plan will be implemented to guide the [sic] in response to the unlikely event of a pipeline lead/failure during Project operation.

v. **CSA Z662 -15, excerpts from Clause 10:**

10.4.3.1 Records shall be maintained to assist in the development of procedures for use during pipeline emergencies. Such records shall include

a. a list of agencies to be contacted during an emergency;

b. the names and phone numbers of key personnel; and

c. the location and description of major repair equipment.

10.5.2.4 Operating companies shall have verifiable capability to respond to an emergency in accordance with their emergency procedures and response plans and shall demonstrate and document the effectiveness of such procedures and plans. Note: *Operating companies should maintain materials, equipment, and spare parts in adequate quantities and at suitable locations for use in emergency repairs.*

29.3 Information Request

a. Please provide the following:

   i. Detailed maps, including GIS maps, of the pipelines including the exact locations, the depth at which the pipelines are buried and/or height above ground surface. If any of this information or documentation is confidential, please provide on a confidential basis.

   ii. Information and locations regarding the control valves and stations planned for the proposed pipeline as well as details on how they are remotely operated, including options should there be a power failure. Include information regarding the redundancy that is built into the system and accessible to Toronto Fire Services. If any of this information or documentation is confidential, please provide on a confidential basis.

   iii. Information regarding experts Imperial can make available to emergency responders in the event of a spill or other emergency, including their response time. Please confirm whether response times are based on modelling that was undertaken to plan for worst-case scenario, including extreme weather events.

   iv. The location, types, and quantity of spill control equipment/resources that are available to mitigate a worst case spill.

   v. The location of catch basins within the entire spill zone(s) included in all mapping.

   vi. Particulars for Imperial's spill response team, including its location and response time, and how information on local sensitive habitats and data (e.g. hydraulics, floodplain, aquatic and terrestrial) is effectively provided to the response team.

   vii. Confirmation of whether Imperial Oil is a member of a spill response consortium.

b. Is Imperial prepared to provide, at its sole cost, training (both table-top and real time exercises) to Toronto staff, and training to TRCA staff.

c. Please confirm whether Imperial is prepared to provide, at its sole cost, retraining of Toronto staff (including Toronto Water and Fire Services staff) when changes are made to its Spill Prevention and Response Plans and Emergency Response Plans, and when changes are made to the equipment to be used in response to spills.

d. Is Imperial prepared to commit to sending a Technical Specialist to Toronto's Emergency Operations Centre ("EOC") upon request by the EOC Director/EOC Liaison Officer in the event of an incident arising from the proposed pipeline or the decommissioned pipeline to assist in the coordination of the Toronto's response to the incident?

e. If Imperial is prepared to make the commitment under (D) above, will Imperial pre-identify the Technical Specialists who could attend the EOC upon request by the EOC Director/EOC Liaison Officer, and update this information on a regular basis?

f. Will Imperial commit to providing a communications staff person/public information officer, upon request by the EOC Director/EOC Liaison Officer, to assist in public communications coordination in the event of a pipeline incident?

g. Is Imperial agreeable to meeting annually with staff in the Toronto's Office of Emergency Management and other appropriate Toronto staff to review Toronto's emergency plans with a focus on Imperial infrastructure and emergency management?

h. Will Imperial commit to sharing details of, and inviting Toronto emergency staff to observe and/or participate in, its pipeline-related training exercises?

i. Will Imperial commit to maintaining for the Toronto's Office of Emergency Management a direct contact line, 24 hours a day, 7 days a week contact line to enable immediate contact with Imperial emergency management staff, should the need arise?

j. Were reports prepared for the table top exercise (see reference (i) above) and 3 day large-scale response exercise (see reference (ii) above)? If so, please provide copies.

29.4 Imperial Response

a. i. The proposed pipeline's minimum depth of cover is 1.2 m. The current design of the HDD maximum depths vary between 20m and 60m. GIS maps of the proposed pipeline centreline were provided to the City of Toronto and detailed drawings including pipeline depth will be provided as part of the permitting application package.

ii Proposed locations for mainline control valves are presented in Table 27-1 above (see IR CoT 1.5 response). The actuated valves are controlled by Imperial's Operations Control Centre through satellite communication. Local operators are also available to close the valves in the case of an emergency. Valves may be operated manually in the event of a power loss and battery-powered Uninterruptible Power Supplies supply auxiliary power to communication equipment and pipeline instrumentation for up to 8 hours.

iii In the case of a suspected release, response time for remote line shutdown and incident notifications is estimated at 5-15 minutes. Local operations response personnel may arrive at the site within 30 minutes to one hour and QM Environmental may arrive with support personnel and equipment within one to two hours. The local operations team is based in Waterdown and QM Environmental is based in Stoney Creek. Field response times vary based on the particular location of the release, traffic and weather conditions. Estimates are based on actual deployments of field personnel to various locations along the line throughout the year.

iv Inventory of spill control equipment stored at the Waterdown pump station is shown in Appendix 7. This equipment is inspected by Imperial field personnel on a quarterly basis. Additional equipment such as vacuum trucks, watercraft, river booms and air monitoring stations would be supplied by the emergency response contractors: QM Environmental, ECRC and GHD.

v Imperial is open to further discussion related to catch basins and will consider including the locations on the Project mapping if the City can provide these locations.

vi Imperial's Spill Response Team is composed of multiple resources that are activated based on the severity of the incident and the skills required for a particular response. These resources include:

- Local SPPL Operations team based in Waterdown

- Imperial Strike Team – emergency responders from other Imperial operations (e.g. Ontario refineries, Finch Terminal)
- Americas Regional Response Team – emergency response personnel from the larger Imperial and ExxonMobil networks. Activated if escalation is required
- Imperial's internal Emergency Support Group (ESG) - crisis management team comprised of corporately-trained technical experts to provide response strategies for a variety of situations including: communication with government, municipality, Indigenous communities and public, supply disruption, natural disaster, industrial hygiene, risk management and health & safety
- Other Imperial support groups such as Corporate Security, Industrial Hygiene and Public Affairs
- QM Environmental (contracted) – Canada-wide recognized response company
- GHD (contracted) – air monitoring, modeling and water sampling service response company
- Shearwater in correlation with Canadian Wildlife Services (contracted) - Canada-wide recognized Wildlife Services response company.
- ECRC (contracted) – professional water response services and tactical response capabilities

Information on local sensitive habitats and other data was taken into account in the pre-designed site-specific spill response tactics that are followed by response personnel. In addition, experts in hydraulics, GIS mapping, wildlife protection and other disciplines are available for support as required, both in-field and remotely. Communications and associated actions are managed using the Incident Command System.

vii While Imperial is not a member of a spill response consortium in this region, operators often share learnings from events that relate to safe operation of the pipelines. Imperial representatives frequently attend other operators' emergency response drills and Imperial invites others to attend its drills to share best practices. Potential incidents and observations of concern within the shared corridor are communicated promptly between operators.

b. Imperial is committed to emergency preparedness and providing capacity building opportunities to stakeholders with the potential to be involved in response activities as required, specifically to supplement already required municipal training programs. Imperial is open to discussing educational opportunities to participate in exercises and training opportunities to enhance the preparedness of Toronto and TRCA staff given the Project activity.

c. Imperial is committed to advise of plan or equipment changes and ensure all parties are fully aware and prepared as required. Additional training opportunities to accommodate changes in plans or equipment would be considered on an as-needed basis.

d. In the event of an incident within Toronto's jurisdiction, Imperial would provide personnel to assist in response coordination with the city and travel to the Emergency Operations Centre (EOC) upon request. Imperial uses the Incident Command System to guide its response protocols and would evaluate the unique situation with Toronto to establish an effective joint management approach for all aspects of the response.

e. Imperial maintains a 24-7 emergency phone number for pipelines (1-800-372-9597), which dispatches the local on-call employee to provide support and activate additional resources and third-party contractors as required. There is not a specific individual that would be identified to

participate. However, Imperial could provide names and contact information for site-based leadership for pipeline infrastructure in the Greater Toronto and Hamilton Area upon request.

f. Imperial is committed to providing a communications staff/public information officer, upon request, to assist in public communications coordination in the event of a pipeline incident.

g. Imperial is committed to regular touchpoints with staff in the Toronto's Office of Emergency Management and other appropriate Toronto staff to review Toronto's emergency plans with a focus on Imperial infrastructure and emergency management. It is recommended that the appropriate frequency be determined at the initial meeting.

h. Imperial is committed to sharing details of, and periodic invitation of Toronto emergency staff to observe and/or participate in, its pipeline-related training exercises. It is recommended that the appropriate frequency be determined at the initial meeting outlined above.

i. Imperial maintains a 24-7 emergency phone number for pipelines (1-800-372-9597), which dispatches the local on-call employee to provide support and activate additional resources and third-party contractors as required. Toronto's Office of Emergency Management is encouraged to contact Imperial directly at any time should the need arise.

j. Keeping response teams prepared and the pipeline operating safely is achieved in part by conducting simulated emergency response activities using realistic scenarios. In October 2018, Imperial simulated a large-scale simulated diesel release into the Humber River in the Etobicoke area and subsequent two days of simulated response actions. The response included an incident command setup, staffed by Imperial's local operations team, Imperial and ExxonMobil's Americas Regional Response Team and municipal, provincial and federal agencies. The City of Toronto was engaged in scenario planning and execution and participation as actors in the simulation. A day of training preceded the response simulation for all participants.

   Attached in Appendix 8 is the report that was prepared to debrief with Imperial and ExxonMobil's Americas Regional Response Team, which includes the internal employees who provide scaled support in the event of an emergency. It is based on evaluations of the exercise completed jointly by Imperial, ExxonMobil, and City of Toronto personnel.

30. CITY OF TORONTO-3.2

30.1 Subject/Topic

Emergency Response – Spill Prevention and Response Plan and Emergency Response Plan

30.2 Reference

i. ER, Table 5.4-8 (Potential Effect, Key Mitigation Measure and Net Effects of Contamination), p. 5-34.

Under the heading "Net Effect", Imperial indicates that "[t]he affected area can vary, dependent on the magnitude of a spill, and management can take days or years."

ii. ER, Table 5.4-8 (Potential Effect, Key Mitigation Measure and Net Effects of Contamination), p. 5-34.

Under the heading "Key Mitigation Measures", it states:

a. A Spill Prevention and Response Plan will be developed and implemented for the Project to guide the prevention of spill and response to spills during the Project construction.

b. b) Imperial's Emergency Response Plan will be implemented to guide the [sic] in response to the unlikely event of a pipeline lead/failure during Project operation.

iii. ER, Appendix B (consultation Key Comment and Response), page 4 of 16.

TRCA is noted as requiring "the development of a watershed-based spill response plan, in addition to the identification of the location of an Emergency Spill Response Team within the Greater Toronto Area (GTA) that is equipped to deal with a fuel spill in Lake Ontario. TRCA expects emergency response exercises that include lake-based and wet and severe weather scenarios are conducted and appropriate location of automated shut off valves are provided."

iv. CSA Z662 -15, Clause 11.26.3 provides as follows:

11.26.3.1 Contingency manuals shall include plans to be implemented in the event of system failures, accidents, and other pipeline emergencies and shall include procedures for prompt and expedient remedial action, taking into account the safety of personnel, minimizing property damage, protection of the environment, limitation of discharge from the pipeline, and pollution control measures.

11.26.3.3 Procedures shall cover the notification of all parties involved in the emergency action and liaison with federal, provincial, and local agencies.

11.26.3.4 Plans shall include procedures for operation, shutdown, and start-up during periods of adverse weather.

30.3 Information Request

a. Does Imperial's Spill Prevention and Response Plan and Emergency Response Plan, for the proposed pipeline, take into account severe weather conditions and include consideration of extreme weather events? If not, is Imperial agreeable to preparing these plans so that they contemplate severe weather conditions (e.g. spill recovery from a frozen waterway) and consider

extreme weather events, including anticipated increases in their frequency and/or severity due to climate change?

b. Does Imperial have site specific Spill Prevention and Response Plans and site-specific Emergency Response Plans for stream crossings tailored to the conditions of each crossing, or are they generic?

c. Please provide copies of Imperial's Spill Prevention and Response Plans and Emergency Response Plans, and refer to those parts that address the frequency of table-top exercises and full emergency response exercises (including mobilization of booms at spill points at the mouth of a river and out in Lake Ontario).

d. Will Imperial commit to providing the Toronto and the TRCA with updated Spill Prevention and Response Plans and Emergency Response Plans, as changes are made to these over time?

e. Will contingency manuals prepared in accordance with CSA Clause 11.26.3 include a requirement to consult with Toronto and TRCA staff during the restoration phase of any required clean-up of a spill, leak or other incident?

30.4 Imperial Response

a. The Spill Prevention and Response Plan is intended for use during Project construction. As the construction phase is anticipated to be completed in the near-term and within a one-year timeframe, the Plan does not take into account frequency and/or severity of extreme weather events due to climate change. During construction, weather and potential flooding events are closely monitored such that proper proactive measures can be taken to secure equipment and/or stop construction activities if necessary.

   In anticipation of and during high water events, Imperial activates its High Water Action Plans, which form part of the Operational Emergency Response Plan. These plans include monitoring of river flows and debris in water crossings where the pipeline may be affected. If warranted, risk mitigation measures may include line shutdown and further escalations.

b. Imperial has asset-specific emergency response plans and asset-specific spill tactics for major watercourses. These are tailored to major watercourses along the right-of-way and include pre-identified control points for watercourses to protect Lake Ontario.

   The Spill Prevention and Response Plan created for construction activities, with respect to watercourse crossings, is intended to be a generic document.

c. Imperial's general emergency response plan for fuels operations, its asset-specific emergency response plan for the Waterdown to Finch pipeline segment and the asset-specific spill tactics plans for major watercourses are located in Appendix 4. Imperial would appreciate the opportunity to meet directly with the City of Toronto emergency services and the TRCA to review and discuss emergency response plans and exercise structure and frequency. Imperial conducts annual exercises involving varying scenarios and field-based exercise.

   A Spill Prevention and Response Plan specific to construction will be provided to the City of Toronto once completed. Imperial is currently in the process of identifying a construction contractor and will work jointly with the selected company to develop this plan to be used for onsite construction activities in the coming months. The Spill Prevention and Response Plan will be finalized a minimum of 30 days prior to the start of construction. The Spill Prevention and Response Plan for construction does not include the provision for table top exercises and full emergency response exercises.

d. Imperial is committed to advise of future plan changes and confirm all parties are fully aware and prepared as required.

e. Imperial will consult with Toronto and TRCA staff during the restoration phase of any required clean-up of a spill, leak or other incident, respective to the governing region.

31. CITY OF TORONTO-3.3

31.1 Subject/Topic

Emergency Response – Source Water Protection

31.2 Reference

i. ER, Section 4.2.3 (Groundwater), page 4-7.

Imperial references the *Clean Water Act*, including local source water protection areas, but does not refer to the LO-PIPE-1 Policy.

ii. ER, Table 5.4-8 (Potential Effect, Key Mitigation Measure and Net Effects of Contamination), p. 5-34.

Under the heading "Net Effect", Imperial states that "[t]he affected area can vary, dependent on the magnitude of a spill, and management can take days or years."

iii. Approved Source Protection Plan: CTC Source Protection Region, Chapter 10, LO-PIPE-1.

This plan (the "Source Protection Plan") implements recommendations arising out of the Walkerton inquiry. The Walkerton inquiry arose as a result of the contamination of municipal drinking water in Walkerton, Ontario that resulted in 2,300 people becoming ill and seven deaths. In 2015, the Ontario Minister of the Environment and Climate Change approved the Source Protection Plan.

Whole Plan (LO-PIPE-1 Policy contained at page 146 of 249):
https://www.ctcswp.ca/app/uploads/2016/03/RPT_20151231_CTC_ApprovedSourceProtectionPlan_fnl_UPDATED_DEC6_2016.pdf.

Chapter 10 Policies:
https://www.ctcswp.ca/app/uploads/2016/03/RPT_20151231_CTC_ASPP_Chapter10_fnl_UPDATED_DEC6_2016.pdf

iv. City Council Decision on CTC
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW19.6

Toronto City Council confirmed its endorsement of the policies contained Source Protection Plan, which is intended to protect the City's drinking water sources from threats, including petroleum spills from pipeline failures.

31.3 Information Request

a. Please confirm whether Imperial's Spill Prevention and Response Plan and Emergency Response Plan for the proposed pipeline are consistent with the policies and procedures set out in the Source Protection Plan in LO-PIPE-1 Policy. Please provide specific references to Imperial's emergency and environmental procedures that demonstrate compliance with the LO-PIPE-1 Policy.

b. Where there are differences between the LO-PIPE-1 Policy and Imperial's Spill Prevention and Response Plan and Emergency Response Plan for the proposed pipeline, please provide a rationale for the difference and explain why it is in Imperial's view acceptable.

c. Where there are differences between the LO-PIPE-1 Policy and Imperial's Spill Prevention and Response Plan and Emergency Response Plan, please confirm whether Imperial will implement all of the policies and procedures in the LO-PIPE-1 Policy of the CTC Source Protection Plan.

d. Please describe how Imperial will test the Contingency Plans and emergency response methods (as these terms are used in the Source Protection Plan) when the proposed pipeline is built to meet the requirements of paragraph (n) of the LO-PIPE-1 Policy.

e. Please provide information on the modelling undertaken or commissioned by Imperial that predicts the product spill extent and magnitude across surface water under different river flow rates. Please provide the results from any drain down analysis undertaken and the fate transport associated with such a release. What is the estimated time it would take for product spilled as a result of a rupture in the proposed pipeline to reach Lake Ontario, including assumptions underlying the estimate?

f. Please provide spill maps for Toronto waterways.

g. Does Imperial agree that although it plans on meeting current standards and using current technologies to mitigate against spills, it is possible that a spill from the proposed pipeline may occur at or near a stream crossing?

31.4 Imperial Response

a. Imperial's Operational Emergency Response Plans (ERP) are consistent with the intent of the policies and procedures set out in the Source Protection Plan LO-PIPE-1 Policy and are reviewed on an annual basis. Compliance is demonstrated by the following examples: Required improvements, as needed, are made to existing ERPs. Spill response time frames are established during various exercises to confirm a clear understanding of estimated times of arrival. Responsibilities of first responders are established and clearly outlined in the ERP and practiced during exercises. Notification protocols are defined in the ERP and various procedures including internal and external direct notification. Water line crossing are defined in the ERP spill response plans. System failure and shut down measures are in place and are monitored, tested and inspected regularly as per Imperial's Pipelines & Distribution Manual, to ensure immediate shut in can be completed during an event at or near water sources.

b. Imperials Prevention and Response Plan protocols are consistent with the policies and procedures set out in the Source Protection Plan in LO-PIPE-1 Policy. Imperial completed a gap analysis of the Emergency Response Plan and Pipelines & Distribution Manual to confirm that present procedures meet the intent of the LO-PIPE-1 Policy of the CTC Source Protection Plan.

c. As per the response above, Imperial can confirm that present procedures meet the intent of the LO-PIPE-1 Policy of the CTC Source Protection Plan.

d. Imperial will test the Operational Emergency Response Plan and methods via operational response exercises, including at a minimum, an annual fire drill and an annual spill response simulation.

e. An Emergency Flow Restricting Device Study was performed to analyze the potential spill volumes along the pipeline in the event of a pipeline failure. A drain down analysis was performed to estimate the potential spill volumes along the pipeline in the event of a pipeline failure. This analysis considered the drain down of the pipeline based on several variables. The stream tracing analysis used a conservative value for river velocities based on maximum annual flow rate values. The analysis was provided to TSSA.

   The analysis predicted that product spilled as a result of a rupture in the proposed pipeline could reach Lake Ontario in 3 to 4 hours. Note that this estimate assumes both maximum flow conditions and a complete separation of the line across its cross-section, an extremely improbable scenario. Furthermore, it does not take credit for any spill response measures that Imperial will put in place in the unlikely event of a rupture. Imperial is prepared to quickly respond

to an emergency, while our integrity management, right-of-way monitoring and preventative maintenance programs are focused on operating safely and with zero volume spilled.

f. Toronto waterway Spill Maps were provided to the TSSA.

g. Pipelines provide a safe, environmentally friendly and vital way to transport products to consumers. Imperial acknowledges the potential risk associated with all methods of transportation and storage of hydrocarbons, including pipelines. The company is committed to spill prevention. Imperial's goal is to have zero spills on land or in water and, if a spill does occur, ensure a rapid, comprehensive response. Imperial continually develops and improves risk management, operations integrity, spill prevention processes and containment capabilities by:

- Increasing spill awareness through training
- Learning from past incidents
- Upgrading key equipment
- Carrying out inspections and surveillance programs

32. CITY OF TORONTO-4.1

32.1 Subject/Topic

Project Impacts – Methods of Construction

32.2 Reference

i. ER, Appendix B, page 3-16.

Imperial responds to TRCA question on pipeline installation methods by advising, in part, that "Trenchless construction methods were considered for the watercourse and wetland crossings that TRCA identified as environmentally sensitive areas; Berry Creek, West Humber River, Main Humber River, Emery Creek and Black Creek, in the City of Toronto" [emphasis added].

32.3 Information Request

a. Please confirm whether Imperial intends use trenchless methods for watercourse crossings in Toronto, including Mimico Creek, Elmcrest Creek, and Renforth Creek.

b. Please confirm exactly where Imperial intends to use trenchless versus trenching methods of construction in the City of Toronto, and provide the rationale for this choice.

32.4 Imperial Response

a. Imperial plans to use trenchless construction methods for many of the watercourses within the City of Toronto, including Mimico Creek near Highway 27 and proposed line KP 48.5, Elmcrest Creek near Centennial Park and proposed line KP 41.5, and Renforth Creek near Centennial Park and proposed line KP 45.5.

b. The Table 32-1 provided below identifies plans for trenchless construction within the City of Toronto. Typically improved roads and major watercourse crossings are planned via trenchless crossing methods. Other inputs considered include right-of-way matters (easement and workspace), environmental sensitivities, safety, traffic effects, stakeholder contributions, and long term impacts.

   The construction methodology workspace is also shown in the maps included in Appendix 10.

Table 32-1: Proposed Construction Method within the City of Toronto

Crossing	Begin Point			End Point				Length	Rationale
Type	City	X	Y	KP	X	Y	KP	Metres (m)	
HDD	TORONTO	[redacted]	[redacted]	44.1	[redacted]	[redacted]	45.66	1562.17	Watercourse and Road
BORE	TORONTO	[redacted]	[redacted]	45.87	[redacted]	[redacted]	45.9	24.38	Utility
BORE	TORONTO	[redacted]	[redacted]	46.15	[redacted]	[redacted]	46.17	24.38	Utility
BORE	TORONTO	[redacted]	[redacted]	46.4	[redacted]	[redacted]	46.43	24.39	Utility
BORE	TORONTO	[redacted]	[redacted]	46.68	[redacted]	[redacted]	46.78	97.53	Road
BORE	TORONTO	[redacted]	[redacted]	46.93	[redacted]	[redacted]	46.96	24.38	Utility
HDD	TORONTO	[redacted]	[redacted]	47.09	[redacted]	[redacted]	47.66	569.03	Road
HDD	TORONTO	[redacted]	[redacted]	48.14	[redacted]	[redacted]	49.07	935.21	Watercourse and Road
BORE	TORONTO	[redacted]	[redacted]	49.54	[redacted]	[redacted]	49.56	24.39	Utility
BORE	TORONTO	[redacted]	[redacted]	49.62	[redacted]	[redacted]	49.64	24.39	Road
HDD	TORONTO	[redacted]	[redacted]	49.81	[redacted]	[redacted]	50.45	643.05	Road
HDD	TORONTO	[redacted]	[redacted]	50.54	[redacted]	[redacted]	50.74	200	Road
HDD	TORONTO	[redacted]	[redacted]	50.98	[redacted]	[redacted]	52.04	1061.35	Road and Railway
BORE	TORONTO	[redacted]	[redacted]	52.2	[redacted]	[redacted]	52.23	24.38	Utility
BORE	TORONTO	[redacted]	[redacted]	52.44	[redacted]	[redacted]	52.51	73.15	Road
BORE	TORONTO	[redacted]	[redacted]	53.01	[redacted]	[redacted]	53.07	60.96	Road
HDD	TORONTO	[redacted]	[redacted]	53.31	[redacted]	[redacted]	53.58	274.96	Watercourse and Road
BORE	TORONTO	[redacted]	[redacted]	53.71	[redacted]	[redacted]	53.81	97.54	Road
BORE	TORONTO	[redacted]	[redacted]	53.96	[redacted]	[redacted]	54.06	97.54	Road
HDD	TORONTO	[redacted]	[redacted]	54.3	[redacted]	[redacted]	54.62	320.04	Watercourse and Road
HDD	TORONTO	[redacted]	[redacted]	54.8	[redacted]	[redacted]	55.32	518.39	Watercourse
HDD	TORONTO	[redacted]	[redacted]	55.6	[redacted]	[redacted]	56.36	765.05	Watercourse
HDD	TORONTO	[redacted]	[redacted]	56.36	[redacted]	[redacted]	56.77	409.96	Watercourse and Road
BORE	TORONTO	[redacted]	[redacted]	56.86	[redacted]	[redacted]	56.89	24.38	Utility

Crossing	Begin Point			End Point				Length	Rationale
Type	City	X	Y	KP	X	Y	KP	Metres (m)	
BORE	TORONTO	[redacted]	[redacted]	57.09	[redacted]	[redacted]	57.18	91.83	Railway
BORE	TORONTO	[redacted]	[redacted]	57.45	[redacted]	[redacted]	57.46	12.06	Railway
BORE	TORONTO	[redacted]	[redacted]	57.66	[redacted]	[redacted]	57.73	73.15	Road
HDD	TORONTO	[redacted]	[redacted]	58.13	[redacted]	[redacted]	58.63	499.87	Road
BORE	TORONTO	[redacted]	[redacted]	59.17	[redacted]	[redacted]	59.2	36.58	Road
BORE	TORONTO	[redacted]	[redacted]	59.38	[redacted]	[redacted]	59.43	48.77	Road
BORE	TORONTO	[redacted]	[redacted]	59.52	[redacted]	[redacted]	59.58	60.96	Road
BORE	TORONTO	[redacted]	[redacted]	59.77	[redacted]	[redacted]	59.8	24.38	Utility
HDD	TORONTO	[redacted]	[redacted]	59.89	[redacted]	[redacted]	60.92	1030.48	Watercourse, Road and Archeological site
BORE	TORONTO	[redacted]	[redacted]	61.15	[redacted]	[redacted]	61.17	24.38	Utility
HDD	TORONTO	[redacted]	[redacted]	61.4	[redacted]	[redacted]	61.89	492.43	Road and Subway

Note: Projected Coordinate System: WGS_1984_UTM_Zone_17N

33. CITY OF TORONTO-4.2

33.1 Subject/Topic

Project Impacts – Depth of pipeline

33.2 Reference

i. ER, Appendix B (Consultation Key Comment and Response Table), page 9 of 16.

Imperial writes as follows: "Imperial indicated its pipelines are buried to a depth that meets or exceeds applicable standards and regulations. The pipeline will be at a minimum 1.2 m deep (4 feet) and, in some instances (trenchless methods like road bores, or rail road crossings), be nearly 8 m deep, or more. In case of the Horizontal directional drilling crossings, however, the deepest profile of the pipe could extend below 8 m, depending on the design and bedrock depth."

ii. The CTC Source Water Protection Policy, LO- PIPE-1, Page 146 of 239.

The LO-PIPE-1 policy in part provides as follows:

…the Ministry of the Environment, Parks, and Conservation (MECP) should work with facility owners and provincial…regulators…. to develop, review and recommend necessary improvements to existing…. risk reduction, and Contingency Plans to ensure the following:

[…]

i) a review is undertaken on the depth of ground cover over the pipeline at each crossing, including an assessment of erosion and flood risk;

j) that the facility owner provides assurance concerning the integrity of their infrastructure to prevent spills where these could be a significant drinking water threat;

k) that a report on the inspection of the pipeline crossings at each tributary is provided to the Source Protection Authority;

l) that the pipeline design and management practices are in place (including potential additional design and operational best management practices);

m) that any new or expansions or pipeline replacements are constructed to meet current best design criteria…

33.3 Information Request

a. Is Imperial prepared to commit to constructing the proposed pipeline to a minimum eight meter depth below each water course so as to ensure an extended design life, before erosion may expose the pipe?

b. Is Imperial willing to monitor, and share with Toronto, bed incision rates in Berry Creek, West Humber, Main Humber, Emery Creek, Black Creek, Mimico Creek, Elmcrest Creek and Renforth Creek?

33.4 Imperial Response

a. Imperial conducts regular depth-of-cover and erosion surveys at all watercourse crossings to confirm that the pipe is sufficiently protected. In some cases, the Project has opted to increase the depth of the proposed pipe for long-term protection from further erosion and extreme flooding scenarios.

Pipe sections installed under watercourses using HDD trenchless technology will be installed at considerable depth below the ground, protecting the pipe from physical damage. HDD trenchless technology used at watercourse crossings are generally deep (greater than 8 m below grade) and set back from watercourses so that they are not anticipated to impact or be impacted by watercourse scour and migration. For trenched construction, the minimum depth below a watercourse will be 1.2 m.

A list of all watercourses and proposed method of construction within the TRCA jurisdiction is provided in Appendix 9. Environmental alignment sheets, including site-specific pipeline depths, will be provided to the TRCA when available. Additionally, Imperial conducted a Channel and Bank Erosion Assessment, which was used to inform pipeline design and depth at each watercourse crossing location.

b. Imperial is willing to share erosion data collected from its water crossing surveys with the City of Toronto upon request. Since Imperial's water crossing monitoring program is designed based on a crossing-specific risk assessment, the type of data collected varies between watercourses.

34. CITY OF TORONTO-4.3

34.1 Subject/Topic

Project Impacts – Toronto's Sanitary Trunk Sewers & Stormwater Management Facility

34.2 Reference

i. **Application, Exhibit F (Land Matters) Tab 1, Schedule 3, Page 1 of 15, paragraph 19.**

Imperial notes that its Project will cross a number of utilities.

Toronto's sanitary trunk sewers are located in the valley lands, often parallel to the water courses. The depth of Toronto's sanitary trunk sewers needs to be considered in determining the depth of Imperial's proposed pipeline below the following watercourses: Berry Creek, West Humber, Emery Creek, Black Creek, Mimico Creek, Elmcrest Creek and Renforth Creek.

A significantly sized, new stormwater management facility was recently completed in the area of the confluence of Emery Creek with the Humber River in Toronto. A significant portion of the facility is within the corridor in which the proposed new Imperial pipeline will be constructed.

34.3 Information Request

a. Please describe how the location and depth of Toronto's sanitary trunk sewers will be incorporated into the depth of cover criteria for the proposed Imperial pipeline where it crosses watercourses in the City of Toronto.

b. Please describe how the proposed pipeline would be located and constructed in the vicinity of the Emery Creek stormwater management facility.

c. Please describe what minimum distance separations are planned for all other municipal utilities in the tablelands, i.e. the lands outside of ravines through which the proposed pipeline will travel.

34.4 Imperial Response

a. Imperial's proposed line depth takes into consideration Toronto's crossed infrastructure, including sanitary trunk sewers. The project's survey contractor purchased the utility geographical data from the respective cities and municipalities. This geographical data is the project's baseline for the location and depth of the City of Toronto's sanitary trunk sewers. Crossings using HDD trenchless technology will be designed deep enough to meet or exceed the minimum clearance from the existing infrastructure in proximity to the watercourses listed above.

b. The proposed pipeline will be installed using HDD trenchless technology underneath the Emery Creek stormwater management facility. The HDD will utilize radio transmitters and/or geospatial tracking to maintain proper clearances. The finalized drill profile including planned clearances will be provided in the TRCA permit application.

c. The Project's minimum clearance for all utilities is 300 mm, unless directly specified by the utilities' owner.

35. CITY OF TORONTO-4.4

35.1 Subject/Topic

Project Impacts – Municipal Activities, Events & By-laws

35.2 Reference

i. ER, page 4-32, Section 4.4.5 (Culture, Tourism, and Recreational Facilities).

Imperial notes that the Project "crosses and is close to several municipal and city parks, golf courses and recreational areas…"

ii. ER, page 6-4, Section 6.3 (Project Interactions with Current and Foreseeable Projects).

Imperial indicates that it will continue to monitor the status of other projects and activities. It further states as follows: "If possible, Project construction timing and sequence will be planned to avoid simultaneous construction activities by several parties in the same location."

iii. ER, page 1-3, Section 1.3.2.

Imperial writes that "In addition to the LTC, Imperial will obtain a number of additional permits or approvals from federal, provincial or municipal agencies to construct and operate the Project.

35.3 Information Request

d. What method of construction will be used for the proposed pipeline in Centennial Park and other Toronto lands, including road crossings?

e. Is Imperial willing to coordinate its construction schedule so as to avoid interrupting or interfering with planned events and activities at municipal parks and facilities, including (i) events and activities for which permits have already been issued and (ii) municipally-run allotment gardens (including Stouffel Allotment Garden (near Martin Grove Road and Dixon Road) and Four Winds Allotment Garden (near Keele Street and Finch Avenue West)?

f. Is Imperial prepared to work with Toronto to ensure that construction of the Project does not conflict with any planned capital projects or maintenance activities Toronto anticipates?

g. What method of construction is Imperial planning to use where it passes under or near Stouffel Allotment Garden and Four Winds Allotment Garden?

h. Is Imperial prepared to restore lands used or owned by Toronto to the condition they were in before Imperial used or entered onto the lands to perform Work on the Project?

i. Can Imperial confirm that it will comply with all municipal by-laws (including, without limitation the Toronto Municipal Code Water Supply Chapter and Sewers Chapter), and obtain all required municipal permits from Toronto (including, without limitation, construction dewatering permits)?

35.4 Imperial Response

d. Imperial plans to use HDD, auger bore and open cut methods of construction within the City of Toronto. Within Centennial Park and Centennial Park Golf Centre, the proposed pipeline route is located within a HONI corridor (approximately KP 44 to KP 46) where there are multiple existing pipelines. The method of construction within the park (Etobicoke Creek to the end of the land parcel) is a combination of HDD (1,560 m), bore (24 m), and open cut (370 m). Please see Table 35-4 Construction Method within City of Toronto below.

Table 35-1: Summary of Proposed Construction Method within the City of Toronto

Construction Method within City of Toronto				
Method	HDD	Bore	Open Cut	Total
Length (m)	9,282	994	7,534	17,810
% of Length	52%	6%	42%	100%
Construction Method for Road Crossings within City of Toronto				
Method	HDD	Bore	Open Cut	Total
Number of Crossings	36	11	0	47
% of Crossings	77%	23%	0%	100%

e. Imperial is willing to coordinate its construction schedule, whenever practical, to avoid interrupting or interfering with planned events and activities at municipal parks and facilities, including events and activities for which permits have already been issued. Impact to the municipally-run allotment gardens is anticipated, however, Imperial is willing to coordinate its construction schedule where practical to minimize these impacts.

f. Imperial is prepared to work with Toronto to avoid potential conflict with any planned capital projects or maintenance activities.

g. Imperial is planning to use trenched construction method where it passes under or near Stouffel Allotment Garden near Martin Grove Road and Dixon Road (approximately KP 49.6 to KP 49.8) and Four Winds Allotment Garden. (approximately KP 61.1 to KP 61.4). Impact to the gardens will occur due to the need for temporary workspace. Imperial is willing to work with the City of Toronto to review these sites and determine if compensation is appropriate.

h. Imperial is preparing a Reclamation Plan that will outline plans to return affected areas to their pre-construction function where feasible, within one to three years after construction. Lands used or owned by Toronto will be restored in accordance with the Reclamation Plan.

i. Imperial will comply with all municipal by-laws, including, without limitation, the Toronto Municipal Code Water Supply Chapter and Sewers Chapter, and obtain all required municipal permits from Toronto, including, without limitation, construction dewatering permits. If a by-law exemption is required, Imperial will seek appropriate permits ahead of construction.

36. CITY OF TORONTO-4.5

36.1 Subject/Topic

Project Impacts – Implications of Not Approving Pipeline

36.2 Information Request

a. What in Imperial's view are the implications of not approving its proposed pipeline, in terms of pipeline safety, pipeline capacity, and alternative means of transporting petroleum products (along with their associated safety and environmental impacts)?

36.3 Imperial Response

a. Imperial's Sarnia Products Pipeline is important infrastructure that provides products used by households and businesses across the Greater Toronto and Hamilton Area. This includes a significant portion of jet fuel for Toronto Pearson International Airport, as well as gasoline and diesel fuel that keeps people, goods and services moving throughout the region. Pipelines provide a safe, environmentally friendly and vital way to transport products to consumers. The products transported by the pipeline originate from and are manufactured in Sarnia, Ontario, more than 250 kilometres away from the distribution terminal in North York. Without pipeline operations between Waterdown and Finch, it would take up to an estimated 400 tanker trucks per day to provide the market with an equivalent volume of fuel.

   The Waterdown to Finch segment of the SPPL has been operating safely for more than 60 years. The replacement of the Waterdown to Finch segment is a proactive initiative to address aging pipeline infrastructure and support continued safe and reliable supply to the region. The timing for replacement has been determined as part of the ongoing integrity management program. If the proposed pipeline is not approved or experiences significant delays, it will have impacts on fuels availability and distribution within the Greater Toronto and Hamilton Area and other parts of Ontario. Alternative logistics would be required following the existing line's deactivation that could affect reliability of fuel supply to consumers, as well as concerns surrounding traffic congestion in this highly urbanized region. As referenced in Exhibit B *Letters of Support and Application* in Imperial's Leave to Construct application, this pipeline is critical to the service delivery of our customers and supply for industrial, commercial and retail outlets in the province, including the Greater Toronto Airports Authority (Toronto Pearson International Airport), as well as the owners and distributors for Esso brand, Mobil brand and many other service station brands. Other possible options to replace the transportation capacity of this pipeline, such as truck transportation, were not considered suitable alternatives.

37. CITY OF TORONTO-5

37.1 Subject/Topic

Toronto Transit Commission ("TTC")

37.2 Reference

i. **ER, Appendix B (Consultation Key Comment and Response Table), page 12 of 16.**

TTC commented that the proposed route for the Project will be crossing an underground subway tunnel. Imperial responded in part that it will follow up with the contact provided to schedule a meeting to discuss proposed subway crossing and the process and technical requirements involved.

ii. **Application, Exhibit H (Record of Consultation – Support Documents), Tab 3, Schedule 2, page 56 of 64.**

Meeting Summary Notes for a meeting with the TTC held on Friday, December 6, 2018. Summary of Actions states: "Provide IOL's Spill Prevention/Contingency Plans to TTC."

37.3 Information Request

a. Is Imperial willing to meet the TTC's Technical Review procedure requirements, and abide by all comments and conditions that may be required for the proposed pipeline, which crosses or is in proximity to TTC stations, tunnels or other significant infrastructure?

b. Is Imperial Oil prepared to provide the TTC with a site specific contingency plan where the proposed new pipe is close to any subway station, tunnel and/or LRT infrastructure that the TTC will operate?

37.4 Imperial Response

a. Imperial has determined the appropriate Technical Review procedure requirements (i.e. Level 2 Technical Review) with the TTC, and is willing to work with the TTC to address their comments and conditions that may be required for the proposed pipeline as it impacts TTC's infrastructure.

b. Imperial is aware of the pipeline's proximity to the TTC's subway line and station at Finch West and will provide the TTC with construction alignment sheets detailing site-specific construction plans. Imperial is committed to work with the TTC to address site-specific concerns and develop a contingency plan if appropriate.

38. CITY OF TORONTO-6

38.1 Subject/Topic

Easements and other Land Matters

38.2 Reference

i. **Application, Exhibit A (General) Tab 1, Schedule 3, Page 3 of 3, paragraph 15.**

Imperial requests that the OEB make an order pursuant to section 97 of the Ontario Energy Board Act approving the proposed form of easement agreements found in Exhibit F, Tab 1, Schedules 4 and 5.

ii. **iApplication, Exhibit F (Land Matters), Tab 1, Schedule 1, Page 1 of 6, Table 1-1.**

Total Parcels Required for the Project. Imperial indicates that there are 114 municipal (public road) requirements in 8 municipalities.

iii. **Application, Exhibit F (Land Matters), Tab 1, Schedule 4, Attachment 1 – Grant of Easement Pipeline (Ontario) Agreement.**

Imperial has provided a draft form of easement.

iv. **Application, Exhibit F (Land Matters), Tab 1, Schedule 5, Attachment 2 – Temporary Workspace Lease Agreement.**

Imperial has provided a draft form of Temporary Workspace Lease Agreement.

v. **ER, page 2-6.**

Imperial states that new easements will be required on a limited number of private lands and Imperial will be working directly with affected landowners to obtain these agreements.

38.3 Information Request

a. Please provide a map showing the exact parcels of land owned by Toronto, or which Toronto has an interest, on which Imperial intends to install the proposed pipeline.

b. Please provide a map showing the exact parcels of land owned by Toronto, or which Toronto has an interest, for which Imperial requires temporary access or temporary use for planning or constructing the proposed pipeline.

c. Please confirm whether Imperial is willing to use Toronto's standard forms of agreements for temporary access or temporary use of Toronto lands for the proposed pipeline.

d. Please confirm whether Imperial is willing to use Toronto's standard forms for easements for permanent installations on City lands that are not part of the public highway.

e. Please confirm whether Imperial is willing to use Toronto's standard form Confirmation and Acknowledgement Agreement for any work for the Project on lands on which the City has an easement interest;

f. Please confirm whether Imperial is willing to pay fair market value for access and use of any Toronto lands;

g. Please confirm whether Imperial will commit to occupying and working on Toronto's public highways in accordance with all by-laws governing public highways including obtaining any

necessary permits under Chapter 743 of the Toronto Municipal Code, and complying to all requirements of this Chapter and any permits issued thereunder.

38.4 Imperial Response

a. Imperial has provided individual crossing drawings for all the City of Toronto roads and Individual Ownership Plans, showing details on the exact parcels of City-owned lands on which Imperial intends to install the pipeline. Mapping showing other parcels on which Toronto has an interest will be submitted shortly. Please see Appendix 10 for an overall reference map that identifies all the parcels.

b. Imperial has provided individual crossing drawings for all the City of Toronto roads and Individual Ownership Plans, showing details on the exact parcels of City-owned lands on which Imperial requires temporary access or for temporary use for constructing the pipeline. Mapping showing other parcels on which Toronto has an interest will be submitted shortly. Please see Appendix 10 for an overall reference map that identifies all the parcels.

c. Imperial is willing to use Toronto's standard forms of agreements for temporary access or temporary use of Toronto lands for the proposed pipeline, subject to Imperial's legal, risk, and construction departments' review and suggested edits to such agreements and approvals. Imperial will submit a request to the City to provide the latest versions of the agreement(s) for Imperial's review.

d. Imperial is willing to use Toronto's standard forms of easements for permanent installations on Toronto lands that are not part of the public highway, subject to Imperial's legal, risk, and construction departments' review and suggested edits to such agreements and approvals. Imperial will submit a request to the City to provide the latest versions of the agreement(s) for Imperial's review.

e. Imperial is willing to use Toronto's standard form of Confirmation and Acknowledgement Agreement for any work for the Project on lands on which the City has an easement interest, subject to Imperial's legal, risk, and construction departments' review and suggested edits to such agreements and approvals. Imperial has been provided with such an agreement for the Geotechnical surveys crossing Toronto's easements for water infrastructure. Imperial will submit a request to the City to provide the latest versions of the agreement(s) for Imperial's review.

f. Imperial has not had any discussions related to compensation or payments for access and use of any City lands for the pipeline installation or temporary construction activities, but is willing to meet with City staff to determine fair compensation for any easement and temporary workspace.

g. Imperial is willing to occupy and work on Toronto's public highways in accordance with all by-laws governing public highways, including obtaining any necessary permits under Chapter 743 of the Toronto Municipal Code, and complying to the requirements of this Chapter and any permits issued thereunder, subject to Imperial's legal, risk, and construction departments' review and suggested edits to such permits and requirements.

39. OEB-1

39.1 Reference

Application, Exhibit A, General; Exhibit B, Letters of Support and Application, Exhibit C: Purpose, Need and Project Timing.

39.2 Preamble

The new 12 inch diameter proposed pipeline will replace the existing pipeline of the same diameter. Imperial Oil stated that the purpose of the new pipeline is to ensure "…continued safe and reliable pipeline operations..." Imperial Oil filed in its evidence a number of letters in support of the need for the proposed pipeline project.

39.3 Question

a. Please describe in more detail the need for the project and the rationale for the project timing.

b. In addition to ensuring continued safe and reliable pipeline operations, please describe other project benefits such as additional capacity or quality of service in support of the need for the new pipeline at this time?

c. What would be the risks and impacts on operational safety and security of supply of a significant delay of the planned 2020 in-service date for the proposed project?

39.4 Imperial Response

a. Imperial's Sarnia Products Pipeline is important infrastructure that provides products used by households and businesses across the Greater Toronto and Hamilton Area. This includes a significant portion of jet fuel for Toronto Pearson International Airport, as well as gasoline and diesel fuel that keeps people, goods and services moving throughout the region. Pipelines provide a safe, environmentally friendly and vital way to transport products to consumers. The products transported by the pipeline originate from and are manufactured in Sarnia, Ontario, more than 250 kilometres away from the distribution terminal in North York. Without pipeline operations between Waterdown and Finch, it would take up to an estimated 400 tanker trucks per day to provide the market with an equivalent volume of fuel.

   The Waterdown to Finch segment of the SPPL has been operating safely for more than 60 years. The replacement of the Waterdown to Finch segment is a proactive initiative to address aging pipeline infrastructure and support continued safe and reliable supply to the region. The timing for replacement has been determined as part of the ongoing integrity management program.

b. In addition to ensuring continued safe and reliable pipeline operations, installation of the new pipeline includes benefits such as improved product availability for customers and reduced supply disruptions due to integrity and maintenance activities, as well as increased pipeline depth in sensitive areas. The project will contribute to the local and regional economy through construction.

c. If the proposed pipeline is not approved or experiences significant delays, it could have impacts on fuel availability and distribution within the Greater Toronto and Hamilton Area and other parts of Ontario. Alternative logistics would be required following the existing line's deactivation that could affect reliability of fuel supply for consumers, including concerns surrounding traffic congestion in this highly urbanized region, As referenced in Exhibit B – *Letters of Support and Application* to Imperial's Leave to Construct application, this pipeline is critical to the service

delivery of our customers and supply for industrial, commercial and retail outlets in the province, including the Greater Toronto Airports Authority (Toronto Pearson International Airport), as well as the owners and distributors for Esso brand, Mobil brand and many other service station brands. Other possible options to replace the transportation capacity of this pipeline, such as truck transportation, were not considered suitable alternatives.

40. OEB-2

40.1 Reference

Application, Exhibit E: Project Tab 1, Schedule 3, page 1, Table 3-1 Design Specifications, and page 2, Table 3-2 Class Location.

40.2 Preamble

Imperial's evidence indicates that all required design specifications such as pipeline wall thickness and maximum operating pressure, and pipeline class location are in compliance with the Canadian Standards Association (CSA) CSA Z662-15 "Oil and Gas Pipeline Systems". The CSA released a 2019 edition of the CSA Z662.

40.3 Question

Please confirm that the pipeline design specifications, including class location, adhere to the most recent, current CSA Z662-2019 requirements.

40.4 Imperial Response

Imperial has been in consultation with the TSSA regarding the applicable edition of the CSA code. TSSA has advised Imperial that TSSA has not yet adopted CSA Z662-19 and it is expected to be adopted in early 2020.

Per the consultation with TSSA in June 2019:

- Imperial confirms the design of the Project will be in compliance with CSA Z662-15 and the TSSA regulations.
- Imperial will perform a due diligence review of the 2019 code revision to determine what differences exist between the 2015 and 2019 code with respect to construction. Imperial plans to construct the pipeline in compliance with CSA Z662-19 and TSSA Code Adoption Document.

41. OEB-3

41.1 Reference

Application, Exhibit A, Tab 1, Schedule 3: Application and Approvals Requested, page 1, paragraph 3

41.2 Preamble

Imperial Oil stated that once the new pipeline is installed, the existing pipeline will be decommissioned and abandoned in place.

41.3 Question

What are the regulatory requirements that Imperial Oil will have to follow for decommissioning and abandonment of the existing pipeline? Please confirm that the abandonment of the existing pipeline will be in accordance with the current regulatory requirements in terms of procedure and safety.

41.4 Imperial Response

Once the replacement pipeline has been safely installed, the existing SPPL segment from Waterdown to Finch will be decommissioned and deactivated, not abandoned.

The deactivation process will follow all provincial regulations and requirements as outlined in the *Technical Standards and Safety Act*, overseen by the TSSA, as well as the CSA Z662 code, a national standard that is adopted within Ontario legislation through O. Reg. 223/01 and *Technical Standards and Safety Act*, 2000, S.O. 2000, c. 16.

42. OEB-4

42.1 Reference

Application, Exhibit D: Routing and Environmental, Tab 1, Schedule 2: Environmental Report, pages 1-2

42.2 Preamble

Copies of the Environmental Report were submitted to the Ontario Pipeline Coordination Committee (OPCC) for review and comment on February 1, 2019.

42.3 Question

Please file all of the comments (in the tabular format used in Exhibit H) that Imperial Oil has received as part of the OPCC review. Include the dates of communication, the issues and concerns identified by the parties, as well as Imperial Oil's responses and actions to address these issues and concerns.

42.4 Imperial Response

The Engagement Summary Tables in Appendix 12 includes comments that Imperial received on the Environmental Report as part of the OPCC review. The table includes the dates of communication, a summary description of issues and Imperial's responses. Below is a summary of those comments.

Imperial submitted an electronic copy of the Draft Environmental Report to the Ontario Pipeline Coordination Committee (OPCC) for review and comment on February 1, 2019. In conjunction with the OPCC review, the Environmental Report was also provided, in electronic format, to municipalities, Conservation Authorities and Indigenous communities for their review and comment. The Draft Environmental Report formed part of Imperial's pre-filed evidence submission to the Ontario Energy Board and was developed in advance of the Leave to Construct application. The Final Environmental Report was submitted as part of the Leave to Construct application.

Comments on the Draft Environmental Report were received from Huron-Wendat Nation (HWN) and Mississaugas of the Credit First Nation (MCFN). Huron-Wendat Nation provided a letter on February 28, 2019. Imperial acknowledged Huron-Wendat Nations' comments and expressed a commitment to the ongoing archaeological assessment work in collaboration with Huron-Wendat Nation throughout the process. MCFN provided an email on Feb 21, 2019 with comments. Imperial provided responses to help clarify MCFN's inquiries relating to the Environmental Report. No comments relating to the Environmental Report were received from Haudenosaunee Confederacy Chiefs Council (HCCC), Haudenosaunee Development Institute (HDI) or Six Nations.

The Ministry of Transportation of Ontario (MTO) provided an email on February 27, 2019 with comments. The MTO noted that it did not have concerns with the Draft Environmental Report as long as Imperial follows all applicable environmental legislation and obtains permits, where required. MTO requested to be informed of any work within its right-of-way to mitigate impacts to MTO projects. Imperial provided a response acknowledging MTO's comment and committed to continue ongoing engagement with MTO throughout the Project. No other comments relating to the Environment Report were received from ministries on the OPCC.

The City of Mississauga provided a letter on April 3, 2019. Imperial acknowledged the comments and provided a detailed response letter on May 3, 2019. No other specific comments relating to the Environmental Report were received by other municipalities or regions.

Three Conservation Authorities provided comments on the Draft Environmental Report during the OPCC review process: Hamilton Conservation Authority provided comments by email on March 1, 2019; Toronto and Regional Conservation Authority provided a letter on March 8, 2019; and Conservation Halton provided a letter on March 19, 2019. Comments from the Conservation Authorities were generally related to permitting level details. Imperial has continued ongoing permitting discussions and on July 5, 2019, Imperial submitted permit applications to the Conservation Authorities. Imperial provided a letter response to each of the Conservation Authorities' comments on the Draft Environmental Report on July 5 and 8, 2019. Additionally, these comments and responses were provided in a concordance table in the respective Conservation Authority permit applications.

43. OEB-5

43.1 Reference

Application, Exhibit H: Record of Consultation, Tab 1, Schedule 1: Regulatory Consultation Log, pages 1-31; Tab 3, Schedule 1: Stakeholder and Other Consultation Log, pages 1-40.

43.2 Preamble

Imperial Oil filed a Regulatory Consultation Log Stakeholder and Other Consultation Log which provide records of consultation activities with government entities and other stakeholders.

43.3 Question

a. Please update both consultation logs to reflect the most recent consultation activities.

b. For each updated consultation log please summarize the concerns and issues that have been raised and that Imperial Oil has addressed, as well as any outstanding concerns that Imperial Oil will be addressing.

43.4 Imperial Response

a. The Engagement Summary Tables in Appendix 11 reflect the most recent consultation activities.

b. The Engagement Summary Tables in Appendix 11 summarize the concerns and issues that have been raised and that Imperial has addressed as well as any outstanding concerns that Imperial will be addressing.

44. OEB-6

44.1 Reference

Application, Exhibit D: Routing and Environmental, Tab 1, Schedule 3: Environmental Protection Plan, page 1

44.2 Preamble

Imperial Oil submitted in the evidence that it would develop several Environmental Protection Plans (EPP) prior to construction as well as several management and contingency plans. The EPP will build on the key mitigation measures identified in the Environmental Report (ER) and guides environmental management during construction. The EPP would include a number of specific Environmental Management Plans (EMP) with project specific commitments to date, permit approval terms and conditions.

44.3 Question

a. Please comment on the content of the EPP and EMP that will be produced to guide construction and how these will address and resolve issues and concerns raised by Ontario Pipeline Coordinating Committee (OPCC) as well as by other consulted stakeholders.

b. What is the planned timeline in the project construction schedule for completing all of the EPPs and EMPs?

44.4 Imperial Response

a. The Environmental Protection Plan (EPP) and Environmental Management Plans (EMP) will provide guidance as to how the Project will be constructed in an environmentally responsible manner and in compliance with applicable regulatory requirements and conditions. The EPP and EMPs will also include Project commitments made to the OPCC and other consulted stakeholders to address issues and concerns raised. The EPP and EMPs will include the following:

   i. An introduction to the Waterdown to Finch Project and a description of the environmental setting and Project Schedule.

   ii. An introduction to the EPP including an overview of the purpose and extent of the document.

   iii. An overview of the environmental management of the Project, such as roles and responsibilities, training programs, and document control.

   iv. General environmental measures applicable to all pre-construction Project activities.

   v. Resource-specific environmental measures applicable to all Project activities.

   vi. Specific environmental measures applicable to all pipeline construction Project activities.

   vii. Site-specific environmental alignment sheets.

   viii. Project post-construction monitoring activities.

b. The EPP and EMPs will be prepared a minimum of 30 days prior to the start of construction. These documents may be updated throughout construction to reflect permit conditions and commitments.

45. OEB-7

45.1 Reference

Letter by the OEB, dated January 11, 2019 to Mr. Detlor of Haudenosaunee Development Institute (HDI) in response to the letter by Mr. Detlor, to Imperial Oil, dated November 5, 2018 and copied to the OEB on November 25, 2018.

45.2 Preamble

Imperial Oil filed its application for leave to construct the proposed pipeline on February 25, 2019. Prior to the application filing, in November 2018, the HDI representing Six Nations of the Grand River, wrote to Imperial Oil expressing concerns over the engagement and consultation and duty to consult as well as a concern about archeology and geological testing on their territory. The OEB received a copy of this correspondence. On January 11, 2019 the OEB sent a letter to HDI stating that the application for the subject pipeline has not yet been filed and stated that once the application is filed the OEB will assess the adequacy of Indigenous consultation as part of the leave to construct proceeding.

45.3 Question

a. Please describe the progress of consultation with the HDI and how were any concerns and issues addressed and resolved and if there are any outstanding issues raised by the HDI in the process of Indigenous consultation.

b. With regard to consultation with Six Nations of the Grand River, please discuss Imperial Oil's efforts to ensure a coordinated consultation with the Six Nations Elected Council, Haudenosaunee Confederacy Chiefs Council (HCCC) and HDI, which are entities representing the interests of Six Nations in relation to the Imperial Oil's project

45.4 Imperial Response

a. The HDI Engagement Summary table in Appendix 11 outlines the progress of consultation to July 12, 2019, the concerns and issues addressed and resolved, and any outstanding issues.

b. Imperial provides the same Project information and engagement opportunities, i.e., participation in field work, report reviews etc., to Six Nations Elected Council and to Haudenosaunee Confederacy Chiefs Council and HDI. Imperial progresses engagement and consultation with each organization individually based on their specific responses, requests, concerns and comments.

46. OEB-8

46.1 Reference

Application, Exhibit G, Indigenous Consultation, Tab 1, Schedule 1, Indigenous Consultation Report; Application, Exhibit H: Record of Consultation, Tab 2, Schedule 1: Indigenous Consultation Log, pages 1-24

46.2 Preamble

Imperial Oil filed an Indigenous Consultation Log with records of consultation activities with Huron-Wendat Nation, Mississaugas of the Credit First Nation (MCFN), and Six Nations of the Grand River (Six Nations), including Six Nations Elected Council, Haudenosaunee Confederacy Chiefs Council (HCCC) and Haudenosaunee Development Institute (HDI). These Indigenous communities and communication entities were identified by the Ministry of Energy, Northern Development and Mines (MENDM) in its delegation letter to Imperial Oil dated September 25, 2018.

46.3 Question

a. Please update the Indigenous consultation log with the record of communication after the application has been filed.

b. Please file any additional documentation received from the MENDM, specifically a Sufficiency Letter from the MENDM, if it has been received.

c. What are the outstanding issues and concerns identified by the Indigenous communities in the process of Indigenous consultation?

d. What is the planned approach that Imperial Oil will take to resolve and address any outstanding issues or concerns raised in the process of Indigenous consultation to date?

46.4 Imperial Response

a. The Engagement Summary Tables in Appendix 11 reflect the record of communication after the application has been filed, including Indigenous consultation and engagement.

b. Imperial has not yet received a Sufficiency Letter from the MENDM nor has Imperial received any other documentation from MENDM. Imperial's engagement with MENDM is documented in the Engagement Summary Tables in Appendix 11.

c. The Engagement Summary Tables in Appendix 11 outline the issues and concerns identified by the Indigenous communities in the process of Indigenous consultation.

d. While there are no outstanding issues and concerns currently, Imperial is committed to ongoing consultation and engagement with Indigenous communities and should additional concerns arise throughout engagement, Imperial will collaborate with Indigenous communities to understand their concerns and respond appropriately.

47. OEB-9

47.1 Reference

Huron-Wendat Nation request for Intervenor Status dated June 25, 2019 and the OEB Letter approving the Huron-Wendat Nation Intervenor Status dated June 27, 2019.

47.2 Preamble

Huron-Wendat Nation (HWN) applied and was granted an intervenor status in this proceeding. The OEB stated that it recognized that HWN has a substantial interest in the proceeding. The letter by HWN requesting the intervenor status, among other things, stated that the pipeline will be located "…through the traditional territory of the Huron-Wendat Nation. This territory contains the richest recorded archeological history in Ontario One of the Huron-Wendat Nation's most important archeological sites in Ontario, the Parsons Site (AkGv-8) is located on the proposed path of the pipeline."

47.3 Question

Please describe the actions and commitments by Imperial Oil to ensure that the Parsons Site archeology is fully protected during construction and operation of the pipeline and that no other HWN archeological and cultural heritage site within the HWN traditional territory is impacted by the proposed pipeline.

47.4 Imperial Response

Imperial recognizes the significance of the Parsons Site and other known and potential archaeological resources and is committed to avoidance and/or mitigation of impacts to archaeological resources. This includes the completion of all provincially required archaeological assessments and appropriate engagement with First Nations. Imperial has been engaging with Huron-Wendat Nation throughout the archaeological assessment process for this Project and will continue to do so.

Registered archaeological sites in the Ontario Archaeological Sites Database associated with the Project footprint, including the Parsons Site (AkGv-8), were identified in the Stage 1 archaeological assessment. Recognizing its significance, Imperial is seeking to protect the integrity of the Parsons Site through the use of HDD trenchless technology beneath the site and extending well beyond the known site limits. Detailed engineering plans for the HDD path are being developed and Imperial will provide HWN with these plans for review. These plans will include information on the depth of the HDD path, the nature of soils and bedrock and other details that will address concerns about potential impacts to the Parsons Site.

Prior to construction, a site avoidance and protection strategy for the Parsons Site will be developed by Imperial and its licenced consultant archaeologist. Imperial will continue to consult and engage HWN during the development of this plan and will provide a draft of the plan for review prior to implementation. This plan will describe the nature, implementation and enforcement of the avoidance and protection measures through to the completion of construction activities. The plan will be enforced during construction and, as required by the Ministry of Tourism, Culture and Sport (MTCS), a Stage 4 Avoidance and Protection report will be completed. As required in the Standards and Guidelines for Consultant Archaeologists (MTCS 2011), the plan will include the following:

1. If grading or other soil disturbing activities caused by the development Project will extend to the edge of an area to be avoided, methods to protect the area will include:
    a. Erecting a temporary barrier around the area to be avoided.
    b. Issuing "no go" instructions to all on-site construction crews, engineers, architects or others involved in day-to-day decisions during construction.

c. Showing the location of the area to be avoided on all contract drawings, when applicable. Include explicit instructions or labelling to avoid that area.

2. During grading and other soil disturbing activities, inspection and monitoring the area to be avoided to verify the effectiveness of avoidance strategies. If alteration of the archaeological site is observed at any time during construction the MTCS will be notified immediately.

3. After completion of the grading and other soil disturbing activities, inspection and reporting to the MTCS on the effectiveness of the strategy.

Imperial has an Operational Emergency Response Plan in place for the Sarnia Products Pipeline and is updating this plan for the operation of the Project. Imperial will share the plan with Indigenous communities. The Indigenous community component of the plan is still being developed and Imperial intends to engage with Indigenous communities, including HWN, to develop a notification protocol in the event of an incident on the SPPL. Additionally, Imperial is developing a Spill Prevention and Response Plan for Project construction and Imperial will engage Indigenous communities, including HWN, in its development related to potential impacts on archaeological sites.

Additionally, a comprehensive Stage 2 archaeological assessment is currently being completed to identify any non-registered archaeological sites within the Project footprint and to clarify the location and extent of known sites, where necessary. Archaeological monitors from Indigenous communities, including HWN are participating in the Stage 2 fieldwork as part of Imperial's continued consultation and engagement with First Nations. Preliminary site summaries outlining the nature of the find and proposed recommendations for appropriate mitigation will be provided to First Nations for review and comment, and Imperial will engage Indigenous communities, including HWN, in the development of the recommendations for further archaeological assessment (including avoidance and protection as outlined above) of any sites identified during the Stage 2 assessment. Imperial will provide to HWN a draft of the Stage 2 report to review and provide comment prior to or in parallel to being submitted to MTCS.

Further information related to this question is contained in responses to Information Requests from the Huron-Wendat Nation (HWN-2 through HWN-10).

48. OEB-10

48.1 Reference

Application, Exhibit F, Land Matters, Tab 1, Schedule 1: Summary of Land Matters and Schedule 2: Negotiations to Date

48.2 Preamble

The project traverses 406 directly affected parcels representing 108 privately owned lands and 298 agency-owned lands. The existing pipeline is within an Imperial Oil easement for approximately one-third or 18.8 km on fee simple lands. Approximately two-thirds, or 43.3 km, will be within a corridor managed by Hydro One on non-fee simple lands that are owned by the Province and administered by the Infrastructure Ontario.

To accommodate the location of the new pipeline, Imperial Oil will have to acquire about 5 hectares of new permanent easements. New permanent easements affect land owned by: Hydro One/Infrastructure Ontario (70.32%), various municipal, provincial and utilities land owners (25.34%) and five private landowners (5.34%).

Construction of the pipeline will also require temporary work areas adjacent to the new or existing easement to store materials, machinery and conduct construction activities (temporary easements). Imperial Oil distinguished between temporary workspace (TWS), which is typically 10 metres wide, and extra temporary workspace (ETWS), which varies in size depending on the location and use. Imperial Oil anticipates acquiring temporary rights for approximately 64.46 hectares of TWS and approximately 106.70 hectares for ETWS.

48.3 Question

What is the current status and prospect of negotiations with all the landowners of properties where permanent and temporary land rights are needed? Please present the summary of response using the format of Table 1.3-1 for permanent and Table 1.4-1 for temporary land agreements. Please add new columns for acquired permanent and temporary agreements by area and percentage to each table.

48.4 Imperial Response

Imperial is working with landowners to present agreements for temporary and permanent land use rights. Imperial will be working with landowners to come to mutually acceptable agreements. Table 48-1 and Table 48-2 have been updated below with new columns added for acquired permanent and temporary agreements and percentage acquired to each table.

In the Leave to Construct application, Imperial originally anticipated that temporary rights would need to be acquired for 64.46 hectares of TWS. This estimate has been revised to 59.77 hectares. The estimate for ETWS remains unchanged at 106.70 hectares.

Table 48-1: Permanent Easement Requirements by Stakeholder Type

Stakeholder Type	Parcel Count	Total Directly Affected Area Hectares (Acres)	Percentage (%)	Total Signed Directly Affected Area Hectares (Acres)	Percentage Acquired (%)
Conservation Authority	2	0.01 (0.03)	0.24	0 (0)	0
HONI	3	0 (0.01)	0.08	0 (0)	0
HONI / Infrastructure Ontario	73	3.52 (8.69)	70.24	0 (0)	0
Local Distribution Company	-	-	-	0 (0)	0
MGCS	5	0.18(0.44)	3.55	0 (0)	0
MGCS; MTO	1	0.04 (0.11)	0.86	0 (0)	0
MTO	18	0.47 (1.16)	9.36	0 (0)	0
Municipal	70	0.30 (0.75)	6.03	0 (0)	0
Municipal (Surplus Lands)	19	0.20 (0.50)	4.01	0 (0)	0
Pipeline	2	0.02 (0.07)	0.55	0 (0)	0
Private	5	0.20 (0.54)	4.34	0 (0)	0
Railroad	4	0.01 (0.04)	0.35	0 (0)	0
Railroad (Surplus Lands)	3	0.02 (0.05)	0.38	0 (0)	0
School Board	1	0 (0.001)	0.01	0 (0)	0
Total	**206**	**4.97 (12.38)**	**100.00**	**0 (0)**	**0**

Table 48-2: TWS/ETWS Requirements by Stakeholder

Stakeholder Type	Parcel Count	Total Directly Affected Area Hectares (Acres)	Percentage (%)	Total Signed Directly Affected Area Hectares (Acres)	Percentage Acquired (%)
Conservation Authority	4	0.44 (1.09)	0.27	0 (0)	0
Hydro One	7	1.33 (3.28)	0.80	0 (0)	0
Hydro One/Infrastructure Ontario	66	69.98 (172.92)	42.05	0 (0)	0
Local Distribution Company	1	0.45 (1.10)	0.27	0 (0)	0
MGCS	24	8.90 (22.00)	5.35	0 (0)	0
MGCS;MTO	-	-	-	0 (0)	0
MTO	11	3.74 (9.24)	2.25	0 (0)	0
Municipal	32	3.83 (9.47)	2.30	0 (0)	0
Municipal (Surplus Lands)	26	10.53 (26.01)	6.32	0 (0)	0
Pipeline	2	3.50 (8.55)	2.08	0 (0)	0
Private	83	52.54 (129.84)	31.57	3.00 (7.42)	3.37
Railroad	-	-	-	0 (0)	0
Railroad (Surplus Lands)	7	10.86 (26.84)	6.53	0 (0)	0
School Board	3	0.37 (0.92)	0.22	0 (0)	0
Total	**265**	**166.47 (411.26)**	**100.00**	3.00 (7.42)	**3.37**

49. OEB-11

49.1 Reference

Application, Exhibit F, Land Matters, Tab 1, Schedule 3: Land Related Permits and Agreements Required, pages 1-5 Table 3-1

49.2 Preamble

Imperial Oil indicated that the project will cross linear features such as watercourses, roads, power lines, gas pipelines and other utilities and that these crossing will require permits and agreements. The evidence provides a summary of all permits and agreements.

49.3 Question

For each permit or agreement required and listed in the evidence please provide a status update.

49.4 Imperial Response

Table 49-1 has been updated to indicate the status of application related to each built infrastructure permits or agreements:

Table 49-1: Permits and Agreements Required

Authority	Purpose
Canadian National Railway Eastern Canada Division of Engineering 1 Administration Road, Concord, ON L4K 1B9 Derek Basso, *Officer Public Works, Design and Construction* Telephone: 905 669-3373 Email: permits.gld@cn.ca	Pipeline Crossing Agreement (Submitted) Permanent Easement (if necessary) (To be Submitted, but may not be required) Work Permit (Submitted)
Canadian Pacific Railway Engineering – Public Works 1290 Central Parkway West, Mississauga, ON L5C 4R3 Jack Carello, *Manager, Utilities and Flagging* Telephone: 905 803-3417 Email: jack_carello@cpr.ca	Utility Crossing Agreement (Submitted) Limited Right of Access Agreement (Submitted) Release of Liability Agreement (Not Required for construction)
Metrolinx Third Party Projects and Utilities 20 Bay Street, Suite 600, Toronto, ON M5J 2W3 AECOM (on behalf of Metrolinx) Transit & Rail, Transportation, Canada 5080 Commerce Boulevard, Mississauga, ON L4W 4P2 Dean Bragg, *Third Party Projects Officer* Telephone: 416 202-3651 Email: dean.bragg@metrolinx.com Manan Raval, *Project Manager* Telephone: 905 206-8567 Email: manan.raval@aecom.com	Pipeline Crossing Agreement (Submitted) Permanent Easement (if necessary) (Not Required) Work Permit (Submitted)

Authority	Purpose
Ministry of Transportation Corridor Management Section 159 Sir William Hearst Avenue, Toronto, ON M3M 0B7 Ted Lagakos, *Senior Project Manager* Telephone: 416 235-3593 Email: ted.lagakos@ontario.ca 407 ETR Concession Company Limited Highway Engineering Services 6300 Steeles Avenue West, Woodbridge, ON L4H 1J1 Dragan Mrkela, *Engineering Technician* Telephone: 905 265-4070 ext. 5479 Email: dmrkela@407etr.com	Encroachment Permit (Submitted) Building and Land Use Permit (To be Submitted) Permanent Easement (if necessary) (To be Submitted, but may not be required) Licence Agreement (To be Submitted, but may not be required) Entrance Permit (if necessary) (To be Submitted)
Hydro One Networks Inc. / Infrastructure Ontario Facilities and Real Estate Services 185 Clegg Road, Markham, ON L6G 1B7 Roman Dorfman, *Senior Real Estate Coordinator* Telephone: 905 946-6243 Email: roman.dorfman@hydroone.com Robert Reynolds, *Land Use Agent* Telephone: 416 721-3772 Email: Robert.Reynolds@HydroOne.com	Permanent Easement (Submitted) Construction and Encroachment Agreement (Submitted) Temporary Use and Access Agreement (Submitted) Technical Review Approval (Not Required for construction) Notice of Entry (Not Required for construction)
Ministry of Government and Consumer Services / Infrastructure Ontario Land Transactions, Hydro Corridors & Public Works 1 Dundas Street West, Suite 2000, Toronto, ON M5G 1Z3 DEL Management Solutions Inc. (on behalf of MGCS / IO) IO Property and Land Management Services 310 Highway 7, Green River, Locust Hill, ON L0H 1J0 Han Zhang, *Project Coordinator* Telephone: 416 212-6180 Email: han.zhang@infrastructureontario.ca Donna Kerr, *Senior Property Manager* Telephone: 905 472-7300 ext. 228 Email: dkerr@dmsproperty.com	Permanent Easement (Submitted) Occupation Agreement (if necessary) (Submitted) Licence Agreement (Submitted) Permission to Enter (Not Required for construction)
City of Hamilton 71 Main Street West, 7th Floor, Hamilton, ON L8P 4Y5 David Lamont, *Manager* Geomatics and Corridor Management Section Telephone: 905 546-2424 ext. 4413 Email: david.lamont@hamilton.ca Darlene Cole, *Senior Business Development Consultant* Planning & Economic Development Department Telephone: 905 546-2424 ext. 7910 Email: darlene.cole@hamilton.ca	Harmonized Crossing Agreement (Submitted, under negotiations) Permanent Easement (Not Required for construction) Temporary Limited Interest Agreement (Submitted) Road Occupancy Permit (To be Submitted) Entrance Permit (To be Submitted) Water Source / Water Disposal Permit (To be Submitted, but may not be required) Utility crossing approval (To be Submitted, but may not be required)

Authority	Purpose
City of Burlington Capital Works, Design and Construction 426 Brant Street, Burlington, ON L7R 3Z6 Frank Vuk, *Project Coordinator* Telephone: 905 335-7600 Email: frank.vuk@burlington.ca	Municipal Consent (To be Submitted) Permanent Easement (if necessary) (Not Required for construction) Entrance Permit (To be Submitted) Utility crossing approval (To be Submitted, but may not be required)
Town of Oakville Environmental Policy 1225 Trafalgar Road, Oakville, ON L6H 0H3 Jeffrey Lee, *Research Policy Analyst* Telephone: 905 845-6601 ext. 3149 Email: jeffrey.lee@oakville.ca	Road Crossing Agreement / Consent (if necessary) (Submitted) Permanent Easement (if necessary) (Not Required for construction) Temporary Street Occupation Permit (To be Submitted) Park Access Permit (To be Submitted) Entrance Permit (To be Submitted) Utility crossing approval (To be Submitted, but may not be required)
Town of Milton Engineering Services 150 Mary Street, Milton, ON L9T 6Z5 Diana Jiona, *Manager, Infrastructure and Right of Way* Telephone: 905 878-7252 ext. 2513 Email: diana.jiona@milton.ca	Road Crossing Agreement (Submitted) Road Occupancy Permit (To be Submitted) Entrance Permit (To be Submitted) Utility crossing approval (Submitted)
Halton Region Legislative and Planning Services 1151 Bronte Road Oakville, ON L6M 3L1 Ryan Fletcher, *Realty Officer* Telephone: 905 825-6000 ext. 7203 Email: ryan.fletcher@halton.ca	Municipal Consent (To be Submitted) Permanent Easement (To be Submitted, but may not be required) Entrance Permit (To be Submitted) Water Source / Water Disposal Permit (To be Submitted, but may not be required) Utility crossing approval (To be Submitted, but may not be required)

Authority	Purpose
City of Mississauga 300 City Centre Drive Mississauga, ON L5B 3C1 Auryn Soares, *Storm Drainage Coordinator* Environmental Services Section Telephone: 905 615-3200 ext. 3363 Email: auryn.soares@mississauga.ca William Moffatt, *Supervisor Capital Acquisitions* Reality Services Telephone: 905-615-3200 ext. 4295 Email: bill.moffatt@mississauga.ca	Public Utilities Coordination Committee (PUCC) Approval (To be Submitted) Road Crossing / Encroachment Agreement (To be Submitted, but may not be required) Permanent Easement (Submitted) Access and Remediation Agreement (To be Submitted, but may not be required) Consent to Enter Agreement (Submitted) Park Access Permit (Not Required for construction) Road Occupancy Permit (To be Submitted) Entrance Permit (To be Submitted) City-owned Storm Sewage Discharge Permit (To be Submitted, but may not be required) Utility Crossing Approval (To be Submitted, but may not be required)
Region of Peel Public Works 10 Peel Centre Drive, Suite A, 6th Floor Brampton, ON L6T 4B9 Christina Marzo, *Manager, Development Services Planning* Telephone: 905 791-7800 ext. 4362 Email: christina.marzo@peelregion.ca	Public Utilities Coordination Committee (PUCC) Approval (To be Submitted) Road Crossing Agreement (To be Submitted, but may not be required) Road Occupancy Permit (To be Submitted) Entrance Permit (To be Submitted) Water Source / Water Disposal Permit (To be Submitted) Utility Crossing Approval (To be Submitted, but may not be required)

Authority	Purpose
City of Toronto *Multiple Addresses* Doodnauth Sharma, *Senior Project Manager* Major Capital Infrastructure Coordination Office Telephone: 416 397-0784 Email: doodnauth.sharma@toronto.ca Ishan Dasgupta, *Property Officer* Real Estate Services Division Telephone: 416 392-7165 Email: ishan.dasgupta@toronto.ca Rocco Leoncini, *Supervisor Parks* PFR Parks Operations, Etobicoke York District Telephone: 416 394-8567 Email: rocco.leoncini@toronto.ca Luigi Nicolucci, *Manager*, *Traffic Planning and Right-of-Way Management* Etobicoke York District Telephone: 416 394-8412 Email: luigi.nicolucci@toronto.ca	Road Crossing Agreement (To be Submitted, but may not be required) Permanent Easement (Submitted) Park Access Agreement (To be Submitted, but may not be required) Street Occupation Permit (To be Submitted) Entrance Permit (To be Submitted) Water Source / Water Disposal Permit (To be Submitted) Utility Crossing Approval (Received)
Conservation Halton 2596 Britannia Road Burlington, ON L7P OG3 Joyce Wood, *Greenspace Project Coordinator* Telephone: 905 336-1158 ext. 2239 Email: jwood@hrca.on.ca	Permanent Easement (if necessary) (Submitted) Permission to Enter Land (Submitted)
Toronto and Region Conservation Authority Planning and Development 101 Exchange Avenue Vaughan, ON L4K 5R6 Annette Lister, *Planner, Environmental Assessment Planning* Telephone: 416 661-6600 ext. 5266 Email: alister@trca.on.ca	Permanent Easement (Submitted) Temporary Workspace / Licence (Submitted)
Enbridge Pipelines Western Research Park 1086 Modeland Road, Building 1050 1st Floor, Sarnia, ON N7S 6L2 Ann Newman, *Supervisor ROW Services* Eastern Region Operations Telephone: 519 339-0503 Maria Bradley, *Senior Analyst* Lands & ROW Telephone: 519 333-6785 Email: est.reg.crossing@enbridge.com	Permanent crossing approval for National Energy Board (NEB) regulated Enbridge pipeline(s) (Submitted) Temporary equipment crossing approval (To be Submitted) Proximity notification for NEB regulated Enbridge pipeline(s) (Submitted)
Enbridge Gas Distribution 500 Consumers Road, North York, ON, M2J 1P8 Jim Arnott, *Senior Advisor Planning* Asset Management Telephone: 416 758-7901 Email: markups@enbridge.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)

Authority	Purpose
Union Gas Limited 918 South Service Road Stoney Creek, ON L8E 5M4 Amreen Rahman, *Regional EIT II* Telephone: 289 649-2030 ext. 5212053 Email: amreen.rahman@enbridge.com	Permanent crossing approval (Application to be Submitted) Temporary equipment crossing approval (Application to be Submitted)
Trans-Northern Pipelines 45 Vogell Road, Richmond Hill, ON, L4B 3P6 Cliff Lee, *C.E.T., Coordinator of Crossings & Facilities* Telephone: 905 770-9959 ext. 292 Email: clee@tnpi.ca	Permanent crossing approval for NEB regulated Trans-Northern pipeline(s) (Submitted) Temporary equipment crossing approval (To be Submitted) Proximity notification for NEB regulated Trans-Northern pipeline(s) (Submitted)
Sun-Canadian Pipe Line 830 Highway 6 North, Millgrove, ON, L0R 1V0 Wendy Sutherland, Field Support Coordinator Telephone: 416 574-9754 Email: wsutherland43@gmail.com	Permanent crossing approval (Submitted) Temporary equipment crossing approval (To be Submitted)
TC Energy (formerly TransCanada PipeLines) 450 – 1st Street SW, Calgary Alberta T2P 5H1 Echo Chapman, *Crossing Coordinator* Telephone: 403 920-6318 Email: echo_chapman@tcenergy.com Website: writtenconsent.transcanada.com	Permanent crossing approval for NEB regulated TC Energy pipeline (Submitted) Temporary equipment crossing approval (To be Submitted) Proximity notification for NEB regulated Trans-Northern pipeline(s) (Submitted)
Alectra Utilities 3240 Mavis Road, Mississauga, L5C 3K1 Jimmy Truong, *Design Technician* Telephone: 905 283-4169 Email: jimmy.truong@alectrautilities.com Helena Turkiewicz, *Permit and Easement Coordinator* Telephone: 905 283-4184 Email: helena.turkiewicz@alectrautilities.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)
Burlington Hydro 1340 Brant Street, Burlington, ON, L7R 3Z7 Peter German, *Director, Engineering* Telephone: 905 332-2254 Email: pgerman@burlingtonhydro.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)
Milton Hydro 200 Chisholm Drive, Milton, ON, L9T 3G9 Linda Lundstrom-Collins, *Project Manager* Telephone: 905 876 4611 ext. 226 Email: lundstrom-collinsl@miltonhydro.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)

Authority	Purpose
Oakville Hydro Protection & Control Department 861 Redwood Square, Oakville, L6K 0C7 Kishen Pais, *Supervisor* Telephone: 905 825-9400 ext. 2244 Email: kpais@oakvillehydro.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)
Toronto Hydro 500 Commissioners Street, 3rd Floor, Toronto, M4M 3N7 Bo Chen, *Engineering Technologist* Telephone: 416 542-3100 ext. 32040 Email: utility.circulations@torontohydro.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)
Bell Canada 140 Bayfield Street, 2nd Floor, Barrie, L4M 3B1 Charleyne Hall, *External Liason – Right of Way* Telephone: 705 722-2264 Email: charleyne.hall@bell.ca	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)
Telus Corporation Engineering Operations & Implementations East 22nd Floor, 25 York Street, Toronto, M5J 2V5 Frederic Sua, *Design Specialist II – Access Engineering* Telephone: 647 837-9112 Email: frederic.sua@telus.com	Permanent crossing approval (To be Submitted) Temporary equipment crossing approval (To be Submitted)

In addition to the non-environmental permits listed above, for watercourse crossings, Imperial submitted applications to the Conservation Authorities (Toronto and Region, Credit Valley, Halton and Hamilton) in July 2019, and submitted a Request for Review to Fisheries and Ocean's Canada (DFO) on July 4, 2019.

50. OEB-12

50.1 Reference

Application, Exhibit F, Land Matters, Tab 1, Schedule 4, Attachment 1: Grant of Easement Pipeline (Ontario) Agreement and Attachment 2: Temporary Workspace Lease Agreement

50.2 Preamble

According to section 97 of the *Ontario Energy Board Act*, 1998 (OEB Act), "In an application under section 90, 91 or 92, leave to construct shall not be granted until the applicant satisfies the Board that it has offered or will offer to each owner of land affected by the approved route or location an agreement in a form approved by the Board." Imperial Oil has requested approval of the forms of permanent and temporary land use agreements it will offer or has offered to affected landowners as part of the application.

50.3 Question

a. Please confirm that the same form of each permanent and temporary land use agreement, filed as part of the application for the OEB's approval, has been offered or will be offered to the landowners whose lands are affected.

b. Have the forms of each permanent and temporary easement agreement been used and/or approved in Ontario or in other provinces where Imperial Oil needed land rights?

50.4 Imperial Response

a. The permanent (Grant of Easement) and temporary (Temporary Workspace Lease) land use agreements filed as part of the application have had some minor updates and have been offered or will be offered to landowners whose lands are affected. Please see Appendix 13 for updated permanent land use agreement and Appendix 14 for the updated temporary land use agreement. Imperial has prepared a TWS Lease – Laydown & Storage agreement for use where laydown yards or storage will be required for construction. The TWS Lease – Laydown & Storage agreement (Appendix 15) has some minor updates from the Temporary Workspace Lease agreement. Additionally, Imperial will require construction access across some parcels where no construction will be occurring. Imperial has prepared a Construction Access agreement to provide to landowners whose lands are affected by construction access only. The Construction Access agreement is attached as Appendix 16.

b. The Grant of Easement, Temporary Workspace Lease, TWS Lease – Laydown and Storage and Construction Access agreements are unique to this Project and were drafted by Ontario legal counsel for use in Ontario

51. OEB-13

51.1 Reference

Application, Exhibit A: General, Tab 3: Application and Approvals Requested

51.2 Preamble

Imperial Oil applied for leave to construct facilities under section 90(1) and 97 of the OEB Act.

51.3 Question

OEB staff has prepared the following draft Conditions of Approval. If Imperial Oil does not agree to any of the draft conditions of approval noted below, please identify the specific conditions that Imperial Oil disagrees with and explain why. For conditions in respect of which Imperial Oil would like to recommend changes, please provide the proposed changes.

Draft
Leave to Construct Conditions of Approval
Application under Section 90 and 97 of the OEB Act
Imperial Oil Limited
EB-2019-0007

1. Imperial Oil Inc. (Imperial Oil) shall construct the facilities and restore the land in accordance with the OEB's Decision and Order in EB- 2019-0007 and these Conditions of Approval.
2. (a) Authorization for leave to construct shall terminate 18 months after the decision is issued, unless construction has commenced prior to that date.

   (b) Imperial Oil shall give the OEB notice in writing:

   i. of the commencement of construction, at least ten days prior to the date construction commences

   ii. of the planned in-service date, at least ten days prior to the date the facilities go into service

   iii. of the date on which construction was completed, no later than 10 days following the completion of construction

   iv. of the in-service date, no later than 10 days after the facilities go into service
3. Imperial Oil shall implement all the recommendations of the Environmental Report filed in the proceeding, and all the recommendations and directives identified by the Ontario Pipeline Coordinating Committee review.
4. Imperial Oil shall advise the OEB of any proposed material change to OEB approved construction or restoration procedures. Except in an emergency, Imperial Oil 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. Both during and after construction, Imperial Oil shall monitor the impacts of construction, and shall file with the OEB one paper copy and one electronic (searchable PDF) version of each of the following reports:

   a) a post construction report, within three months of the in-service date, which shall:

   i. Provide a certification, by a senior executive of the company, of Imperial Oil's adherence to Condition 1

ii. Describe any impacts and outstanding concerns identified during construction

iii. Describe the actions taken or planned to be taken to prevent or mitigate any identified impacts of construction

iv. Include a log of all complaints received by Imperial Oil, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions

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

b) a final monitoring report, no later than fifteen months after the in-service date, or, where the deadline falls between December 1 and May 31, the following June 1, which shall:

i. Provide a certification, by a senior executive of the company, of Imperial Oil' adherence to Condition 3

ii. Describe the condition of any rehabilitated land

iii. Describe the effectiveness of any actions taken to prevent or mitigate any identified impacts of construction

iv. Include the results of analyses and monitoring programs and any recommendations arising therefrom

v. Include a log of all complaints received by Imperial Oil, including the date/time the complaint was received, a description of the complaint, any actions taken to address the complaint, the rationale for taking such actions

6. Imperial Oil shall designate one of its employees as project manager who will be responsible for the fulfillment of these conditions, and shall provide the employee's name and contact information to the OEB and to all the appropriate, and shall clearly post the project manager's contact information in a prominent place at the construction site.

   The OEB's designated representative for the purpose of these Conditions of Approval shall be the OEB's Manager of Supply and Infrastructure (or the Manager of any OEB successor department that oversees leave to construct applications).

51.4 Imperial Response

Imperial has reviewed and is aligned with the majority of the approval conditions as outlined above. Below are requested amendments to specific conditions including justification.

2. (a) Authorization for leave to construct shall terminate 24 months after the decision is issued, unless construction has commenced prior to that date. *Justification: Imperial is requesting an additional six months to account for any unanticipated delays in the construction start date.*

3. Imperial shall implement all the recommendations of the Environmental Report filed in the proceeding, and implement all commitments as outlined in Imperial's responses to the Ontario Pipeline Coordinating Committee members' review. *Justification: Not all recommendations provided by the Ontario Pipeline Coordinating Committee members could be implemented for construction. Where adoption of a recommendation was not possible, Imperial provided a response to that recommendation with a rationale and/or alternate mitigation measures. Imperial will uphold all commitments made in response to comments received during the review of the Environmental Report.*

4. Imperial shall advise the OEB of any proposed material change to OEB approved construction or restoration procedures. Except in an emergency, Imperial 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. *Justification: Imperial is requesting that this notification requirement be limited to material changes only to allow for greater site-specific flexibility associated with construction or restoration activities.*

5. For the purposes of 5(a)(i), 5(a)(v) and 5(b)(i), Imperial proposes to have its Project Manager of Execution provide certification, who will be the individual responsible for confirming adherence to the conditions and overall management of construction. Accordingly we request revisions to these subsections to reflect that the Project Manager of Execution will provide certification.

6. Imperial shall designate one of its employees as project manager who will be responsible for the fulfillment of these conditions, and shall provide the employee's name and contact information to the OEB and to all the appropriate stakeholders, and shall clearly post the project manager's contact information in a prominent place at the construction site. *Justification: added clarification to provide employee's name to the OEB and to all appropriate stakeholders.*

52. HONI-1

52.1 Topic

Transmission Corridor Access

52.2 References

Exhibit A, Tab 1, Schedule 3

The existing pipeline is located within an Imperial right-of-way ("ROW") for approximately 18.8 km, and within a ROW managed by Hydro One Networks Inc. ("HONI") for approximately 43.7 km. New easements will be required on a limited number of private lands and Imperial will work directly with the affected landowners to obtain these agreements. New easements will also be required within the HONI ROW, and Imperial is working with HONI and Infrastructure Ontario to secure the necessary agreements.

Exhibit D, Tab 1, Schedule 1, Page 1 of 2

The proposed pipeline route was determined to be the only reasonable option, particularly within the urban landscape, because it benefits from following existing utility corridors.

Exhibit H, Internal Rec 634

Email confirmation from Imperial to IO with the understanding that Imperial should proceed with the Class EA assessment for the scope of undertaking within the HONI corridor.

Exhibit H, Internal Rec 78

TRCA confirmed that no independent archaeology work is required since no geotechnical investigation is being conducted on TRCA-owned lands; all within HONI corridor.

52.3 Information Request

a. There seems to be some inconsistencies in the referencing to the HONI ROW that IOL is seeking to utilize for this Project. For the purposes of clarity, is it IOL's understanding that the ROW managed by HONI is a utility corridor or an electricity transmission lines corridor?

b. Please confirm that discussions between IOL, IO and HONI regarding the use of the corridor began in early 2018.

c. Is there any update on the status of all of IOL's real estate requirements to complete this Project?

d. In IOL's view, why has an agreement not been reached yet with HONI and IO?

52.4 Imperial Response

b. Imperial acknowledges HONI's statutory right to the corridor and that their electric transmission system is the primary use. Imperial also acknowledges that there are multiple hydrocarbon pipelines that are active in the corridor and have been in operation for decades. Imperial's Project is in line with Provincial and Municipal intent for infrastructure development. The Province has identified a significant portion of this corridor under the Parkway Belt West Plan (PBWP) which the Ministry of Municipal Affairs has indicated was implemented to "create a multi-purpose *utility corridor*, urban separator and linked open space system." The goals and objectives of this Plan encourage the use of the Planning Area for such proposals.

The following provides a general overview of the Project in relation to the HONI corridor and the PBWP:

i. Approximately 30 km of the pipeline in the HONI corridor is within the PBWP area, which is almost half the length of the proposed pipeline

ii. Approximately 29 km of the pipeline in the HONI corridor is within the Southern Link of the PBWP, where a specific objective is to provide for future utilities

The 2014 Provincial Policy Statement also provides direction that "Planning authorities shall plan for and protect corridors and rights-of-way for infrastructure [which includes oil and gas pipelines and associated facilities], including transportation, transit and electricity generation facilities and transmission systems to meet current and projected needs." Municipal Official Plans, therefore, either designate the HONI corridor as part of the Parkway Belt West Planning Area or, in the case of the City of Toronto, as a "utility corridor", where the Project deviates from the Parkway Belt West Planning Area.

c. Imperial confirms that these discussions commenced in early 2018.

d. Imperial is having ongoing negotiations with landowners and interest holders regarding real estate requirements for the Project. Please see Table 52-1 for Permanent Easement requirements and Table 52-2 for Temporary Workspace requirements for a status of real estate requirements to complete the Project.

Table 52-1: Permanent Easement Requirements by Stakeholder Type

Stakeholder Type	Parcel Count	Total Directly Affected Area Hectares (Acres)	Percentage (%)	Total Signed Directly Affected Area Hectares (Acres)	Percentage Acquired (%)
Conservation Authority	2	0.01 (0.03)	0.24	0 (0)	0
HONI	3	0 (0.01)	0.08	0 (0)	0
HONI / Infrastructure Ontario	73	3.52 (8.69)	70.24	0 (0)	0
Local Distribution Company	-	-	-	0 (0)	0
MGCS	5	0.18(0.44)	3.55	0 (0)	0
MGCS; MTO	1	0.04 (0.11)	0.86	0 (0)	0
MTO	18	0.47 (1.16)	9.36	0 (0)	0
Municipal	70	0.30 (0.75)	6.03	0 (0)	0
Municipal (Surplus Lands)	19	0.20 (0.50)	4.01	0 (0)	0
Pipeline	2	0.02 (0.07)	0.55	0 (0)	0
Private	5	0.20 (0.54)	4.34	0 (0)	0
Railroad	4	0.01 (0.04)	0.35	0 (0)	0
Railroad (Surplus Lands)	3	0.02 (0.05)	0.38	0 (0)	0
School Board	1	0 (0.001)	0.01	0 (0)	0
Total	**206**	**4.97 (12.38)**	**100.00**	**0 (0)**	**0**

Table 52-2: TWS/ETWS Requirements by Stakeholder

Stakeholder Type	Parcel Count	Total Directly Affected Area Hectares (Acres)	Percentage (%)	Total Signed Directly Affected Area Hectares (Acres)	Percentage Acquired (%)
Conservation Authority	4	0.44 (1.09)	0.27	0 (0)	0
Hydro One	7	1.33 (3.28)	0.80	0 (0)	0
Hydro One/Infrastructure Ontario	66	69.98 (172.92)	42.05	0 (0)	0
Local Distribution Company	1	0.45 (1.10)	0.27	0 (0)	0
MGCS	24	8.90 (22.00)	5.35	0 (0)	0
MGCS;MTO	-	-	-	0 (0)	0
MTO	11	3.74 (9.24)	2.25	0 (0)	0
Municipal	32	3.83 (9.47)	2.30	0 (0)	0
Municipal (Surplus Lands)	26	10.53 (26.01)	6.32	0 (0)	0
Pipeline	2	3.50 (8.55)	2.08	0 (0)	0
Private	83	52.54 (129.84)	31.57	3.00 (7.42)	3.37
Railroad	-	-	-	0 (0)	0
Railroad (Surplus Lands)	7	10.86 (26.84)	6.53	0 (0)	0
School Board	3	0.37 (0.92)	0.22	0 (0)	0
Total	**265**	**166.47 (411.26)**	**100.00**	3.00 (7.42)	**3.37**

e. Imperial is continuing to work with HONI and Infrastructure Ontario (IO) to determine the appropriate easement widths to accommodate various construction methods. HONI and IO are proposing, in certain situations, easements widths in excess of land Imperial requires to operate and safely maintain its pipeline.

53. HONI-2

53.1 Topic

Technical Feasibility

53.2 Reference

Exhibit H, Internal Rec 467

Second part of meeting discussed crossings, encroachments and technical requirements within HONI and IO corridor lands.

Exhibit F, Tab 1, Schedule 1, Page 3

Additional new easements will also be required within a corridor managed by HONI/IO on non-fee simple lands for approximately 43.3 km (26.9 mi). Within the HONI/IO managed corridor lands Imperial is proposing a 0.3 m (one foot) wide easement where Imperial currently has an overlapping existing easement and where trenchless construction methods are proposed. A 1.5 m (five foot) wide easement is being proposed on HONI/IO corridor lands where Imperial does not have an overlapping existing easement within the HONI/IO managed corridor lands. In order to minimize impacts to HONI's operations and competing land use in the area, Imperial has reduced the width requirements to the extent possible. Further breakdown of requirements for permanent easement by land ownership is outlined in Table 1.3-1.

53.3 Information Request

a. Please further detail IOL's current proposal for locating the proposed pipeline in the HONI and IO lands. Specifically, please indicate the current separation between the proposed pipeline wall and existing Hydro One tower footings.

b. Please explain in detail why IOL is deviating from the generally accepted easement width of 10 feet for this Project. Please provide all studies and analyses completed that assisted IOL in establishing that the proposed easements are sufficient not only for construction, but for maintenance access in the future.

c. Please provide any and all examples in Ontario where a minimum 10 foot easement has not been adhered to for commercial pipelines and the methods of those installations.

53.4 Imperial Response

a. Imperial submitted detailed utility crossing and cross-section drawing packages showing the proposed pipeline in relation to HONI infrastructure on May 17 and May 27, 2019 to HONI's Real Estate Coordinator. A subsequent temporary workspace drawing package was submitted on June 7, 2019 that detailed the proposed construction activities requiring temporary land rights from HONI and IO. All of the drawings indicate separation between the proposed pipeline wall and/or temporary workspace and HONI's tower footings or other facilities.

b. Imperial has determined, through consultation with its operations and maintenance teams, the appropriate permanent easement requirements to safely install, operate and maintain the pipeline. These permanent easements are supplemented by temporary agreements for additional space as required for the construction and maintenance of the pipeline. With more advanced technologies available to operate and maintain the proposed pipeline, the need for land access and the area of land required has been reduced. This is most applicable to segments using HDD trenchless technology as the technique enables pipeline installation up to 60m below the surface. In the unlikely event of an integrity issue with the pipeline in an area installed using HDD

trenchless technology, the section of the pipe would be isolated and abandoned, and a new pipe would be installed using HDD trenchless technology. As a result, an easement width equal to the width of the pipeline, i.e. 12.75 inches, would suffice. For trench construction, Imperial has established that a 7-foot easement would be sufficient for operation and maintenance needs on lands where it currently does not have an overlapping easement to accommodate surface access the width of a light-duty truck. In lands where Imperial does have an overlapping easement, a 5-foot easement will suffice. Imperial's Waterdown to Finch Project is a unique project to land administered by HONI and IO. Of the 43km of pipe to be constructed in these lands, nearly half of such lands will be installed using HDD trenchless technology. A significant number of other utility companies using trenchless drilling through HONI and IO administered lands are constructing crossing the corridor and not running long distances inside the corridor.

c. Imperial recently completed a pipeline installation in Ontario where HONI and IO accepted a variance to their 10-foot easement policy. Imperial's Credit River Valley Project required a portion of the SPPL to be replaced under the Credit River Valley. The new easement for a HDD trenchless technology installed section of pipe overlapped the existing easement of the pipeline being replaced. HONI and IO accepted a 5-foot easement width at this location.

54. HWN-1

54.1 Reference

Exhibit D, Tab 1, Schedule 1

54.2 Preamble

The Ontario Energy Board's Environmental Guidelines for the Location, Construction, and Operation of Hydrocarbon Pipelines and Facilities in Ontario ("OEB Environmental Guidelines") requires proponents to evaluate alternative pipeline routes and to assess the impacts of each alternative route, including impacts on the social and cultural components of the environment.

The OEB Environmental Guidelines provide that assessment of the impact of a proposed project on cultural heritage resources should inform decisions in the pipeline development planning stage, and requires that proponents demonstrate due diligence by protecting cultural heritage resources by appropriate conservation, avoidance and mitigation.

54.3 Information Request

a. Please provide all evidence that Imperial Oil Ltd. ("Imperial") and/or its consultant(s) considered and developed assessments of alternative routes, including, but not limited to:

   i. evaluating impacts on the Huron-Wendat Nation's inherent and treaty-based right to the integrity of its archaeological and burial sites;

   ii. evaluating impacts on the important Huron-Wendat Nation archaeological site known as the Parsons Site (AkGv-8) (the "Parsons Site"), specifically;

   iii. assessing impacts of route evaluation and selection, construction, and operation on cultural heritage features, including the Parsons Site; and

   iv. assessing appropriate avoidance and mitigation of impacts to archaeological sites, including the Parsons Site.

b. Please provide any such reports, evaluations and assessments.

54.4 Imperial Response

a.

   i Imperial recognizes the significance of archaeological and burial sites to HWN. The Stage 1 archaeological assessment report (Past Recovery 2019) was used by Imperial to identify known archaeological sites and cultural heritage resources within the proposed Project footprint to evaluate potential impacts to these resources and evaluate alternative routes and/or mitigation measures. As the Stage 2 archaeological assessment progresses and additional sites within the Project footprint are identified, Imperial will continue to evaluate the pipeline route and/or mitigation measures for each site. As part of its commitment to consultation and engagement for the Project, Imperial will continue to seek input from HWN regarding recommendations for mitigation of impacts to archaeological resources.

   ii Following Imperial's review of the Stage 1 archaeological assessment report (Past Recovery 2019), which identified the Parsons Site as a significant archaeological site, Imperial considered mitigation measures to avoid impacts to the Parsons Site. An alternate route was evaluated as part of the Environmental Report (Section 2.6), which would have avoided the Parsons Site. However, based on design, environmental and socioeconomic considerations

and constraints, the alternative route was deemed not feasible. Therefore, a plan for avoiding impacts to the Parsons Site during construction and operation through the use of HDD trenchless technology pipeline installation methods is being developed and will be provided to the HWN for review and comment.

iii A similar process as outlined in part ii. above will be used to assess impacts of the route on any other cultural heritage feature within the Project footprint, as necessary.

iv As discussed above, Imperial will continue to consider and develop appropriate avoidance and mitigation measures for the Parsons Site and other archaeological sites within the Project footprint in consultation with Indigenous communities, including HWN.

b. Imperial refers the reader to the following reports:

- Waterdown to Finch Project Environmental Report (ERM 2019), and
- Stage 1 Archaeological Assessment for the Proposed Waterdown to Finch Project (Past Recovery 2019).

In addition to the above listed reports, Imperial and its consultants are currently drafting an Archaeology Site Avoidance Strategy. This will be provided to all Indigenous communities for review and comment.

55. HWN-2

55.1 Reference

Exhibit D, Tab 1, Schedule 2

Exhibit E, Tab 1, Schedule 2

Environmental Report at 5.4.7, page 5-32

55.2 Preamble

Imperial's Environmental Report, which is a component of the Leave to Construct Application, states that Imperial will endeavour to avoid known archaeological sites to the greatest extent possible through routing evaluation and maintenance of appropriate buffers; that trenchless installation methods will be used to mitigate impacts to known archaeological sites, (e.g. the Parsons Site); and where mitigation measures are not achievable, will undertake Stage 3 and potentially Stage 4 Archaeological Assessments prior to construction.

55.3 Information Request

a. Please provide Imperial and/or its consultants' research, evaluations, assessments and reports regarding:

   i. the Parsons Site's location, depth, width, and length, including any research, evaluations, assessments and reports regarding uncertainty on any of these items;

   ii. the expanse or length for which Imperial intends to use trenchless installation in the vicinity of the Parsons Site, and how Imperial determined the appropriate expanse or length;

   iii. potential impacts of trenchless installation on the Parsons Site, including the potential impacts of associated vibration and soil disturbance; and

   iv. the feasibility of the trenchless installation method for the area of the Parsons Site, including any and all engineering reports.

b. Please provide Imperial and/or its consultants' research, evaluations, assessments and reports regarding what constitutes an appropriate buffer area for archaeological sites, including for the Parsons Site.

c. Please outline what Imperial intends to use as an appropriate buffer area for archaeological sites, including for the Parsons Site, and its rationale for this determination.

d. Please outline how Imperial will determine whether it is necessary to conduct Stage 3 and/or Stage 4 Archaeological Assessments, including how Imperial will assess mitigation and avoidance opportunities such as routing changes, including Imperial's plans for engagement, consultation and accommodation of affected First Nation(s).

e. Please outline Imperial's plans for conducting Stage 3 and/or Stage 4 Archaeological Assessments in the event that such assessments are necessary, including details on:

   i. involvement of First Nation monitors;

   ii. how Imperial will use the information gathered through the participation of First Nation monitors;

   iii. how Imperial will provide up-to-date information, including information gathered through the participation of First Nation monitors, to the participating First Nation(s);

iv. how Imperial will involve First Nation(s) in reviewing and commenting on the Stage 3 and/or Stage 4 Archaeological Assessment reports;

v. how Imperial will advise First Nation(s) of any responses from the Ministry of Tourism, Culture and Sport ("MTCS") on the Archaeological Assessment reports filed with it;

vi. how Imperial will ensure that any artifacts recovered in the course of Stage 3 and/or Stage 4 Archaeological Assessment work are appropriately stored and/or returned to the affected First Nation, where applicable; and

vii. how Imperial will ensure that First Nation(s) have the opportunity and capacity funding to complete any ceremonies necessary due to the Stage 3 and/or Stage 4 Archaeological Assessment work.

55.4 Imperial Response

a.

i. The Parsons Site is situated on the main terrace above the east bank of Black Creek, extending across and to the north and south of the HONI corridor. Although there have been numerous excavations on the Parsons Site going back to the 1950s, only a small portion of the village has been systematically excavated and reported on. As such, the full extent of the site remains unknown. The most recent detailed site mapping suggests that the main village (as defined by the palisade walls) is approximately 385 m NNW-SSE and approximately 250 m WSW-ENE (see b below for relevant reports). The 1989-1990 excavations identified the western palisade partway down the slope above Black Creek. The deepest feature identified in 1989-1990 was c. 65 cm deep.

ii. The Project will use an approximately 1 km long horizontal directional drill to cross below the Parsons Site. Recognizing the significance of the Parsons Site, Imperial has planned to extend the HDD from the west side of Black Creek to the east side of Sentinel Road resulting in a c. 400 m buffer to both the east and west of the Parsons Site as defined by the village palisade and identified middens. This buffer will be reconsidered if required based on the results of the completed Stage 2 assessment.

iii. To complete the trenchless installation of the pipeline, Imperial and its construction contractor will be using the latest drilling technologies and best practices including accurate steering and modern fluid mixing systems. This will reduce the likelihood of potential impacts associated with HDD trenchless technology. Any vibration would be at the location of the drilling rig which will be located at a distance from the Parsons site.

iv. Based on preliminary geotechnical data, Imperial has determined that trenchless installation is feasible near the Parsons site. This preliminary geotechnical data will be supplemented by site-specific geotechnical investigations that will inform the engineering design of the drill. Once geotechnical investigations have been completed, the engineering report will be shared with HWN.

b. Appropriate archaeological site buffers are defined in the Standards and Guidelines for Consultant Archaeologists (MTCS 2011). Following the completion of a Stage 2 archaeological assessment of a property, these include a 20 m protective buffer around the site as defined by positive Stage 2 test pits or surface finds with an additional 50 m monitoring buffer where any ground disturbing activities must be monitored by a licenced archaeologist. Following the completion of a Stage 3 archaeological assessment, the protective buffer for Indigenous Woodland village sites is a minimum 20 m and the protective buffer for other sites is 10 m.

Imperial recognizes that these buffers may not be appropriate in all situations, especially when the site has not been subject to a comprehensive, systematic archaeological assessment, as is the case with the Parsons Site. As such, appropriate site buffers will be evaluated on a site-by-site basis and in consultation with First Nations and MTCS, as appropriate.

With respect to the Parsons Site, a review of previous archaeological assessments associated with the site was undertaken as part of the archaeological assessment process for this Project. This included a review of the following reports:

Archaeological Services Inc.

1990. Mitigation of the Parsons Site (AkGv-2) Interim Report. Report on file, ASI office, Toronto.

1989. Final Report for an Archaeological Resource Assessment of the Water Main Route from Richview Pumping Station to Keele Reservoir. Report on file at ASI office, Toronto.

URS Canada Inc. (URS)

2015. Report on the Stage 4 Mitigation (Avoidance and Protection) of the Parsons Site (AkGv-8) City of Toronto Multi-Use Pathways Project, Municipal Class Environmental Assessment, City of Toronto, Ontario. Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.

2013. Stage 2 Archaeological Assessment: City of Toronto Multi-Use Pathways Project (Revised). Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.

2011. Stage 1 Archaeological Assessment: City of Toronto Multi-Use Pathways Project (Revised). Report on file, Ontario Ministry of Tourism, Culture and Sport, Toronto.

Edited volume

1998. The Archaeology of the Parsons Site: A Fifty Year Perspective. Ontario Archaeology No. 65/66.

The most recent Site Registration Form for the Parsons Site filed with the MTCS following the URS Stage 4 mitigation of the pathway through the site delineates the site based on the location of the village palisade (and some recorded middens outside the palisade) and includes a 20 m protective buffer beyond these limits. Imperial recognizes that archaeological resources forming part of the Parsons Site are likely to occur beyond the palisade walls and the middens identified during previous archaeological investigations. At present, impacts in close proximity to the Parsons Site are limited to two boreholes required for geotechnical information in support of the development of the HDD plan.

Additionally, Imperial recognizes that ossuaries are often associated with Indigenous village sites and that these, and indeed any burials, are of particular concern to First Nations. In general, the Project recognizes a one kilometre (1000 m) buffer surrounding village sites as an area of high potential for ossuaries. All areas of the TWS within 1 km of the known Parsons Site boundary will be shovel tested to determine if cultural materials are present. During construction, archaeological and First Nations monitoring of construction of the Project will be undertaken between Jane Street and KeeleStreet. Construction excavation will involve the careful removal of the sod and topsoil and/or fill deposits using an excavator with a smooth-edged ditching bucket. This will be followed by hand "shovel-shining" of the exposed subsoil to check for archaeological features. Areas of fill clearly associated with deep disturbance (existing underground utilities) and areas already cleared of archaeological concerns would be excluded from shovel-shining.

c. As outlined above, appropriate site buffers will generally follow MTCS Standards, but will be determined on a case by case basis. For the Parsons Site, given the uncertain limits for the site,

Imperial is seeking to extend the HDD from the west side of Black Creek to the east side of Sentinel Road resulting in a c. 400 m buffer to both the east and west of the Parsons Site as defined by the village palisade and identified middens. This buffer will be reconsidered if required based on the results of the completed Stage 2 assessment.

d. The Standards and Guidelines for Consultant Archaeologists (MTCS 2011) provide criteria for determining when archaeological finds require further assessment through Stage 3 and/or Stage 4 assessments. These criteria include the number and nature of artifacts recovered, their context, and the presence of archaeological features. While following these criteria, recommendations for Stage 3 and/or Stage 4 assessments of Indigenous sites will be made in consultation with appropriate First Nations through the continued consultation and engagement process.

   A Stage 4 assessment may include mitigation of a site through excavation and/or avoidance and protection. Imperial recognizes that site avoidance and protection is generally the preferred mitigation approach and will seek to implement this approach wherever feasible.

e.

   i. Imperial will continue to include First Nation monitors in the archaeological assessment fieldwork for the Project, including for any Stage 3 and/or Stage 4 assessments undertaken on sites with Indigenous concerns.

   ii. Imperial values the information provided by the First Nation monitors participating in the fieldwork and their comments, insights and concerns are shared with personnel on-site and recorded in daily field records. Information from First Nation monitors is considered in guiding fieldwork methods and in developing appropriate assessment strategies.

   iii. Imperial is committed to ongoing engagement with Indigenous communities, including HWN regarding the Project throughout consultation and construction. Updates on the Stage 3 and/or Stage 4 Archaeological Assessments will be provided in addition to other communication between Imperial and the Indigenous communities, including HWN. It is Imperial's opinion that communication has been effective. Imperial is open to HWN's suggestions on improvements.

   iv. Imperial will provide First Nations with draft copies of all archaeological assessment reports, including Stage 3 and Stage 4 assessments, for their review and comment prior to or in parallel to these reports being submitted to MTCS.

   v. Imperial will provide First Nations with copies of the final archaeological assessment reports as accepted by MTCS and with copies of the MTCS review letters for these reports.

   vi. According to the *Ontario Heritage Act* and the MTCS Standards and Guidelines for Consultant Archaeologists (MTCS 2011), the archaeologist under whose licence an archaeological assessment is undertaken is required to appropriately store all materials (artifacts, field records, etc.) until they can be transferred to a government approved cultural facility. Collections arising from any archaeological assessments undertaken as part of the Project will be properly maintained by the archaeologist until an appropriate transfer has occurred. Imperial will work with the First Nations to return all collections of Indigenous concern to the appropriate community and/or deposited in an appropriate cultural facility. This will include filing the appropriate paperwork with MTCS.

   vii. To date, Imperial has been providing capacity funding to Indigenous communities, including HWN for Project engagement, including archaeology field monitor participation, archaeology report reviews and meeting travel costs. If Indigenous communities, including HWN, identify additional specific capacity funding requirements relevant to Project engagement and consultation, including ceremonies at the site, Imperial is open to considering reasonable requests.

56. HWN-3

56.1 Reference

Exhibit E, Tab 1, Schedule 6

Exhibit D, Tab 1, Schedule 4

56.2 Preamble

Imperial plans to commence construction in the fourth quarter of 2019. Stage 2 Archaeological Assessment work is currently ongoing.

56.3 Information Request

a. Please outline how affected First Nation(s) will be involved in reviewing and commenting on the Stage 2 Archaeological Assessment report.

b. Please provide the date by which Imperial will file the results of the Stage 2 Archaeological Assessment and indicate whether and when Imperial expects to receive comments from MTCS with regard to this Assessment.

c. If archaeological sites are identified through the Stage 2 Archaeological Assessment, please identify what steps Imperial will take to ensure that appropriate avoidance or mitigation measures are taken to protect the sites, including what steps Imperial will undertake with respect to consultation and accommodation of First Nation(s).

d. If such avoidance or mitigation measures will impact the project schedule, please identify how Imperial will adapt its schedule to ensure that the appropriate avoidance and/or mitigation measures are undertaken.

56.4 Imperial Response

a. Imperial will provide the affected First Nations with a draft of the Stage 2 archaeological assessment report for review and comment prior to or in parallel to submitting the report to MTCS.

b. The date for filing the Stage 2 archaeological assessment is dependent on the completion of the Stage 2 archaeological fieldwork and the associated analysis and reporting time required to complete the report. MTCS report review times are typically a minimum of 60 business days from the date of report submission assuming that an expedited report review has been approved by MTCS.

c. In advance of completing the full Stage 2 archaeological assessment report, Imperial is preparing interim summary reports for archaeological findspots/sites found. These reports will include information on the nature of the finds, mapping and recommendations for any further archaeological assessment (including avoidance and protection). The interim reports will be provided to the First Nations for their review and comment as part of ongoing consultation and engagement. Consultation and engagement will help inform the preparation of final recommendations for site mitigation to be included in the full Stage 2 archaeological assessment report.

d. The schedule will be adjusted to allow for archaeological concerns to be addressed. This will include meeting all MTCS requirements and undertaking appropriate consultation and engagement with the First Nations.

57. HWN-4

57.1 Reference

Exhibit G, Tab 1, Schedule 1

57.2 Preamble

Imperial's Guiding Principles include that "in areas where Imperial operates, Indigenous communities are engaged through consultation, employment and business development and educational program investments."

57.3 Information Request

a. Please outline the employment, business development and educational program investment activities Imperial will undertake with the Huron-Wendat Nation.

57.4 Imperial Response

a. Imperial is currently considering the construction contracting strategy for the Project and will share more information as it becomes available. Indigenous community businesses, including HWN businesses may pursue sub-contracting opportunities directly with Imperial's general contractor and Imperial shall facilitate and assist in such discussions, if requested by HWN. Also, Imperial will provide resources relevant to general business opportunities.

   Imperial is open to considering sponsorship and capacity building opportunities with communities. Please direct HWN's requests to the Project Community Liaison Officer.

58. HWN-5

58.1 Reference

Exhibit G, Tab 1, Schedule 1

Exhibit H, Tab 2, Schedule 5

58.2 Preamble

Imperial's Guiding Principles include that "Imperial endeavours to understand Indigenous perspectives on issues of mutual interest, to deal constructively with differing viewpoints and to engage Indigenous communities and their representatives in open and forthright consultation. Imperial maintains an open and ongoing dialogue about the Project with Indigenous leaders, community members and their designated representatives by: respecting traditional practices, decision-making processes...[and] cultural activities…"

58.3 Information Request

a. Please outline Imperial's understanding of the Huron-Wendat Nation's traditional practices with respect to the protection of archaeological and burial sites, such as the Parsons Site.

58.4 Imperial Response

a. Following the direction in MENDM's September 10, 2018 letter to Imperial outlining the delegation of the Duty to Consult, Imperial has been consulting Indigenous communities.

   The HWN Engagement Summary tables in Appendix 11 outline the information provided by Huron-Wendat Nation regarding traditional practices with respect to the protection of archaeological and burial sites, such as the Parsons site and the discussions between HWN and Imperial regarding the Parsons site and protection of archaeological and burial sites.

   Imperial continues to consider this information in discussion of appropriate mitigation measures with HWN. If HWN has additional information to provide or if Imperial has misunderstood information provided, Imperial is open to considering further input.

59. HWN-6

59.1 Reference

Exhibit G, Tab 1, Schedule 1

59.2 Preamble

Imperial states that as new information arises throughout the consultation process, Imperial will consider the information received and incorporate changes into project design, as appropriate.

Imperial is aware that the Parsons Site has recently been disturbed by the Project work being undertaken.

59.3 Information Request

a. Please provide all evidence that Imperial and/or its consultant(s) has considered and developed assessments of project design changes, including alternate routing options, in response to the recent disturbance to the Parsons Site.

b. Please provide all research, evaluations, assessments and reports regarding possible project design changes, including alternate routing options, relating to this event.

c. Please provide any and all correspondence between MTCS and Imperial regarding the disruption of the Parsons Site.

59.4 Imperial Response

a. Given the significance of the Parsons Site, Imperial has proposed an increased certainty of avoidance of the Site by designing the HDD entry location to the east side of Sentinel Road, placing it c. 400 m east of the documented location of the eastern palisades for the village. By placing the HDD entry at this location, it is proposed, in addition to avoiding impact to the modern infrastructure, the potential of impacting this archaeological site is reduced. Confirmation that the HDD entry location does not hold further archaeological potential will be completed through appropriate archaeological field assessments prior to construction.

   The current avoidance measures to be implemented by the Project is the use of HDD trenchless technology. Imperial understands that both MTCS and the First Nations communities have concerns associated with the use of HDD trenchless technologies resulting in impacts to unassessed sites.

   To address these concerns related to HDD trenchless technologies and to avoid impact to archaeological sites, this strategy will be refined in coordination with site-specific, detailed engineering to confirm that identified concerns are addressed. Of particular consideration will be the depth of the HDD as it extends from the entry/exit points.

   The archaeological assessment will be conducted along the centreline to a distance of 50 m inside of the HDD entry and exit to identify any archaeological sites in the shallowest areas of the HDD. Pending final design, it is expected that the pipeline will be more than 10 m deep beyond 50 m along the HDD path, thereby reducing risk of frac-out, slumping, and pipeline discharge to surface. During operations, in the unlikely event of an integrity issue with the pipeline in an area installed using HDD trenchless technology, the section of the pipe would be isolated and abandoned, , and a new pipe would be installed using HDD trenchless technology.

   The proposed Borehole 136 is located in close proximity to the Parsons Site. Past Recovery, ERM and Imperial propose moving Borehole 136 from its originally planned location approximately 23 m west on to the previously assessed pathway. At this proposed location, the

geotech rigs would bore through the cement pathway and extend into an area clear of archaeological concern. The pathway was assessed by URS Canada archaeologists in 2011 through Stage 4 construction monitoring. The assessment removed all topsoil with a Link-Belt 210 excavator equipped with a smooth ditching bucket. The area was subsequently shovel-shined to confirm no cultural features or archaeological resources were present in the subsoil. The report concluded that the pathway and the soil underneath is considered clear of any further archaeological concern.

b. The following two reports are currently being developed and will be provided to all Indigenous communities for review:

   Archaeology Site Avoidance Strategy Memo

   Parsons Site – Borehole Assessment Update

c. The results of the Stage 2 assessment, including the limited test pitting that was done at the Parsons Site for the original location of BH136 (described above) will be fully reported on in the Stage 2 report. To date, there has been no correspondence with MTCS regarding this event.

60. HWN-7

60.1 Reference

Exhibit D, Tab 1, Schedule 2

Environmental Report at 7, p. 7-4

60.2 Preamble

Imperial states in its Environmental Report that a "Chance Find" Archaeological Resources Contingency Plan will be implemented if unknown archaeological resources are discovered during construction.

60.3 Information Request

a. Please provide any drafts of this plan that Imperial has created to date, and/or, if Imperial intends to base this plan on an existing plan for another project, please provide copies of said plan.

b. Please outline the steps that Imperial will take with respect to consultation and accommodation of First Nation(s) in the development and implementation of the "Chance Find" Archaeological Resources Contingency Plan.

c. Please outline the training that Imperial intends to provide its construction crews in order to ensure that personnel on site can identify artifacts, such that the "Chance Find" Archaeological Resources Contingency Plan protocols will be initiated.

d. Please outline the steps Imperial will take in the event that artifacts are uncovered during construction, including the steps that Imperial will take with respect to:

   i. temporary and permanent storage of artifacts;

   ii. return of artifacts to affected First Nation(s); and

   iii. provision of the opportunity and capacity funding to First Nation(s) to perform any necessary ceremonies at the site.

60.4 Imperial Response

a. Prior to construction, Imperial will develop a Project-specific Chance Find Heritage Resources Contingency Plan to be implemented during the construction phase of the Project. Imperial is in the process of drafting this plan and can commit to providing it to First Nation communities for review and comment once available.

b. Imperial is committed to providing the draft "Chance Find" Heritage Resources Contingency Plan to HWN and the other Indigenous communities. Imperial will consider HWN and the other communities' input and update the protocol and/or provide responses, as appropriate.

c. Employees and on-site personnel/contractors will receive site orientation and training regarding compliance with the Project's "Chance Find" Heritage Resources Contingency Plan. All new employees will receive site orientation and training during their induction and the training will focus on the procedure in place for responding to newly identified sites and how to report these sites or observed site impacts. Training records will be kept and maintained.

d.

   i. Please refer to Imperial's response to ii. below.

ii. As discussed above in response to HWN-2, as required by the *Ontario Heritage Act* and the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), Imperial's licenced consultant archaeologist(s) will be responsible for the temporary storage of all artifacts for the Project until an approved permanent has been identified and the collection transfer has been finalized. Imperial and its licenced consultant archaeologist(s) will consult with the First Nations to confirm the appropriate permanent disposition of all artifacts and, where appropriate, their return to the affected First Nation.

iii. To date, Imperial has been providing capacity funding to Indigenous communities, including HWN for Project engagement, including archaeology field monitor participation, archaeology report reviews and meeting travel costs. If Indigenous communities, including HWN, identifies additional specific capacity funding requirements relevant to Project engagement and consultation, including ceremonies at the site, Imperial is open to considering reasonable requests.

61. HWN-8

61.1 Reference

Exhibit D, Tab 1, Schedule 4

61.2 Preamble

Stage 2 Archaeological Assessment work is currently underway. The Standards and Guidelines for Consultant Archaeologists (MTCS 2011) recommends that such work be undertaken through test pits.

The Standards and Guidelines for Consultant Archaeologists (MTCS 2011) recommends that such test pits be dug to 5 cm below the subsoil.

Huron-Wendat ossuaries are typically found well below these levels, with the most visible signs (the presence of bones) visible from anywhere between 20 cm to over 2 m below the subsoil.

61.3 Information Request

a. Please outline the steps that Imperial will take to detect ossuaries in the Project area.

b. Please outline the training that Imperial will provide, or require to be provided, to its archaeological consultant on the detection of Huron-Wendat ossuaries.

c. Please outline the training that Imperial will provide to its construction crews on how to respond in the event that bones are uncovered.

d. Please outline what steps Imperial will take in the event that bones are uncovered during construction, including consultation and accommodation of First Nation(s).

e. In the event that a Huron-Wendat ossuary is found in the Project area, please outline the steps that Imperial will take to:

   i. consult with the Huron-Wendat Nation on appropriate protection and preservation measures for the site;

   ii. implement such protections and preservation measures in order to avoid disturbance of the ossuary;

   iii. ensure that the Huron-Wendat Nation is able to perform any necessary ceremonies relating to the ossuary, including by providing capacity funding; and

   iv. commemorate the ossuary in a manner deemed appropriate by the Huron-Wendat Nation.

61.4 Imperial Response

a. Wherever feasible, Stage 2 test pits are being dug into sterile subsoil with the subsoil carefully examined to confirm that there is no indication of disturbance indicative of a feature, including an ossuary pit, within the subsoil. Where compact fill deposits prevent hand excavated test pits from reaching subsoil, alternative assessment methodologies (including the use of mechanical excavation) will be considered and implemented, as appropriate.

b. The archaeological assessment work of the Projectis under the direction of licenced consultant archaeologists and, as required by MTCS, the field directors are also licenced (either P- or R-licences). The field crew are not required to be licenced, however have a range of experience (from limited to more than 20 years of fieldwork) and are under the direct supervision of the licencees. Licenced consultant archaeologists in Ontario are required to have a combination of academic training and extensive field, analysis and reporting experience on Stage 1 through

Stage 4 assessments of a variety of sites. The recognition of sub-soil cultural features, including ossuaries, is an essential part of this training and experience.

During construction, if bones or ossuaries are identified the Huron-Wendat Nation will be notified in accordance with the Heritage Resources Contingency Plan.

c. A "Chance Find" Heritage Resources Contingency Plan will be prepared and followed in the event that bones (or other potential heritage resources) are uncovered during construction. On-site personnel will receive site orientation and training regarding compliance with the Plan.

d. Both the *Ontario Heritage Act,* and the *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) include specific protocols to be followed in the event that human remains are uncovered either during the course of an archaeological assessment or by accident during construction or other activities. These include an immediate cessation of work, securing the area of the find and the notification of appropriate authorities (police, coroner, Registrar of Cemeteries, etc.) to determine whether the finds constitute a crime scene. If the finds are determined not to constitute a crime scene, the Registrar of Cemeteries will institute an investigation, typically including a licenced archaeologist. If there is any indication that the remains may be Indigenous, appropriate First Nations must be notified immediately of the find and involved in the mitigation of the find.

e.

i. Imperial will follow the requirements of the *Ontario Heritage Act a*nd the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, C. 33 and engage with the relevant Indigenous communities.

ii. The person in charge of the work shall immediately contact MTCS, the Cemeteries Regulation Unit of the Ontario Ministry of Consumer Relations, the appropriate municipal police, the local coroner, and Imperial's archaeologist, if applicable. All excavation and other activity that could disturb the site shall immediately cease, and the area shall be secured in a manner which protects the site location and prevents public access and trespass.

iii. To date, Imperial has been providing capacity funding to Indigenous communities, including HWN for Project engagement, including archaeology field monitor participation, archaeology report reviews and meeting travel costs. If Indigenous communities, including HWN, identifies additional specific capacity funding requirements relevant to Project engagement and consultation, including ceremonies at the site, Imperial is open to considering reasonable requests.

iv. Imperial is open to considering reasonable requests to commemorate an ossuary, should the situation arise.

62. HWN-9

62.1 Reference

Exhibit D, Tab 1, Schedule 3

Exhibit D, Tab 1, Schedule 2

Environmental Report at 7, p. 7-2

62.2 Preamble

Imperial intends to develop a Spill Prevention and Response Plan to provide the Project with guidance in the development of prevention, contingency planning, and reporting practices for the timely and effective prevention and response to potential inadvertent, construction-related releases to land and surface water.

Imperial also intends to develop an Environmental Protection Plan and several management and contingency plans.

62.3 Information Request

a. Please advise whether Imperial intends to develop an emergency response plan to mitigate and manage potential impacts of a spill on archaeological sites, including the Parsons Site.

   i. If Imperial does not intend to do so, please provide Imperial's rationale;

   ii. If Imperial does intend to do so, please provide any drafts of this plan that Imperial has created to date, and/or, if Imperial intends to base this plan on an existing plan for another project, please provide copies of said plan.

b. Please outline any consultation and accommodation steps undertaken by Imperial with First Nations with respect to the creation of an emergency response plan to mitigate and manage potential impacts of a spill on archaeological sites.

62.4 Imperial Response

a.

   i. Pertaining to the construction of the Project, Imperial will mitigate disturbance to known sites with Cultural Heritage Value or Interest (CHVI) through avoidance or Stage 3/4 archaeological assessment. Avoidance strategies for sites that retain CHVI will include, but are not limited to, realignment or utilization of trenchless installation methods such that there will be no surface activity within a known site with residual CHVI. Where trenchless crossings will be located, detailed geotechnical investigations are underway that will inform appropriate site-specific crossing design, including the HDD of the Parsons Site, such that the risk of inadvertent returns is negated. For these reasons, it is not Imperial's intent to develop an emergency response plan for potential impacts of a spill on archaeological sites during Project construction beyond the "Chance Find" Archaeological Resources Contingency Plan.

   ii. See response to (i).

b. Imperial has an Operational Emergency Response Plan in place for the Sarnia Products Pipeline and is updating this plan for the operation of the Project. Imperial will share the plan with Indigenous communities. The Indigenous community component of the plan is still being developed and Imperial intends to engage with Indigenous communities, including HWN to

develop a notification protocol in the event of an incident on the SPPL. Additionally, Imperial is developing a Spill Prevention and Response Plan for Project construction and Imperial will engage Indigenous communities, including HWN in its development related to potential impacts of a spill on archaeological sites.

63. HWN-10

63.1 Reference

Exhibit G, Tab 1, Schedule 1

63.2 Preamble

Imperial's Guiding Principles include that Imperial conducts its business in a manner that respects the land, environment, rights and cultures of indigenous communities.

63.3 Information Request

a. Please advise how Imperial will ensure that the Huron-Wendat Nation is able to fulfill its duty to protect its archaeological and burial sites throughout the Project's construction, including:

   i. How Imperial will ensure that Huron-Wendat Nation monitors are involved in monitoring construction work throughout the Project's construction;

   ii. How Imperial will advise the Huron-Wendat Nation of the construction schedule and any changes to the construction schedule;

   iii. How Imperial will use the information gathered through the participation of Huron-Wendat Nation monitors; and

   iv. How Imperial will provide up-to-date information, including information gathered through the participation of Huron-Wendat Nation monitors, to the participating First Nation(s).

63.4 Imperial Response

a.

   i. Imperial is open to considering the involvement of Indigenous monitors, including Huron-Wendat Nation monitors in monitoring construction work throughout the Project's construction. After Indigenous communities, including Huron-Wendat Nation, and Imperial come to a reasonable agreement regarding the participation of monitors, Imperial will follow a similar approach to the current engagement facilitating monitor participation in Project field work to confirm involvement.

   ii. After Indigenous communities, including Huron-Wendat Nation and Imperial come to a reasonable agreement regarding the participation of monitors, Imperial will follow a similar approach to the current engagement facilitating monitor participation in Project field work to advise Indigenous communities, including Huron-Wendat Nation of the construction schedule and any changes to the construction schedule. Imperial is committed to ongoing engagement with Indigenous communities, including HWN regarding the Project throughout consultation and construction. It is Imperial's opinion that communication has been effective. Imperial is open to suggestions on improvements.

   iii. After Indigenous communities, including Huron-Wendat Nation and Imperial come to a reasonable agreement regarding the participation of monitors, Imperial will follow a similar approach to the current engagement facilitating monitor participation in Project field work to consider the information gathered through the participation of monitors. The current approach focuses on resolution of monitor input, comments and concerns in the field, i.e., if monitors have archaeology requests, the request is discussed and addressed through collaboration between the monitors and archaeology field directors and field work continues with potential changes or a shared understanding of methodology based on that discussion. In cases

where monitors and archaeology field directors are not able to address requests with mutually-acceptable solutions in the field, requests are directed to Imperial and Imperial and the Indigenous community consultation office representatives discuss the request and work to identify appropriate resolution.

iv. Imperial is committed to ongoing engagement with Indigenous communities, including HWN, regarding the Project throughout consultation and construction. It is Imperial's opinion that communication has been effective. Imperial is open to suggestions on improvements.

64. ENBRIDGE-1

64.1 Reference

Imperial Oil Application, Exhibit A, Part 3, Paragraph 4

"Pipelines owned by other operators inside the ROW will continue to operate without disruption as crossing agreements and safety buffers will be put in-place."

64.2 Information Request

a. Please provide details of and assessment forms all equipment that may cross Enbridge pipe or will be working in the Enbridge easement, especially the Vermeer tracked equipment being used to complete the Horizontal Directional Drills.

b. Please provide all detailed construction drawings as per Schedule C standards (below).

c. Please provide details of projected construction duration and timing, and clarify if there will be any evening construction activities.

SCHEDULE C

Plan Showing Approved Crossing

A drawing of each crossing shall be prepared in accordance with sub-sections A, B and D below. The drawing shall show the location and dimensions of the crossing and the clearance between the lowest catenary and the surface of the ground within the pipeline right-of-way or its projected limits.

Standard Drawing Requirements

Note: all views to be combined in one drawing.

A. *Plan View*

Scale

- in metric - scale of 1:500 or at a scale which clearly defines all details of the crossing.

Dimensions

- distance along the Union Pipeline easement to the crossing from a definable legal limit; i.e. lot line, river, road allowance limit, etc.
- width of the Union Pipeline easement to one-tenth (0.0) of a metre.
- location of the Union Pipeline(s) within the easement to one-tenth (0.0) of a meter at right angles to the pipeline easement.
- angle of the crossing (measured to the Union Pipeline easement)
- show the width of the utility easement(s) to one tenth (0.0) of a metre.
- width of streets in vicinity of crossing.

Note: Parallel Utility easements shall not encroach on the Union Pipeline easement without the written consent of Union.

Identify

- legal description of the crossing location; ie. lot, section, concession, township, town, village, etc.

- all additional Union Pipeline appurtenances; i.e. concrete slabs, weights, pipeline markers, etc.
- north arrow
- scale

B. *Section View*

The section view is to be along the proposed utility that crosses the Union Pipeline.

Scale

- In metric, vertical 1:100, horizontal 1:200 or to a scale that clearly identifies all details of the crossing.

Dimensions

- depth of the Union Pipeline(s) to one-tenth (0.0) of a metre
- Vertical distance of the proposed utility below grade to one-tenth (0.0) of a metre
- clearance to the Union Pipeline
- diameter of each Union Pipeline to be crossed
- easement or right-of-way limits

Identify

- if elevations are assumed, then reference the point of the assumed datum
- distance of the pipeline(s) to the Union Pipeline easement limits
- ground surface profile for 20m on either side of crossing
- scale

C. *Profile View*

The profile view is to be along the Union Pipeline and is only required if the encroachment is on the Union Pipeline easement for a definable distance; ie. parallel encroachments such as roads and any grading of the easement, etc.

Scale

- in metric, vertical 1:100, horizontal 1:200 or to a scale that clearly identifies all details of the crossing

Dimensions

- depth of the Union Pipeline(s) to one-tenth (0.0) of a metre
- depth of the proposed utility to one-tenth (0.0) of a metre
- clearance to the Union Pipeline
- diameter of each Union Pipeline to be crossed
- easement or right-of-way limits

Identify

- if elevations are assumed, then reference the point of the assumed datum

- distance of the pipeline(s) to the Union Pipeline easement limits to one-tenth (0.0) of a meter
- ground surface profile for 20m on either side of crossing
- scale
- existing Union Pipeline markers

D. *Location Plan View*

Scale

- in metric, scale of 1:12000 or to a scale that clearly identifies the location

Dimensions

- distance to the nearest town of major geographic feature to 0.1 of a kilometre

Identify

- township, town, village, city, county, regional municipality, etc.
- lot, concession, street, highway, road, etc.
- north arrow

Title Block

Identify

- name of the Applicant and the name of the engineering company who compiled the drawing (where applicable)
- drawing number and the date of the drawing
- revision dates (if applicable)
- signature of the applicant and the engineering company
- legal description of the crossing location
- description of the utility
- date of the survey

Additional Information

Identify

- all specifications of the utility, ie. diameter, wall thickness, material to be conveyed, minimum yield strength, operating pressure, field test pressure, mill test pressure, materials comprising the utility, protective devices to be installed and the proper method of installation.
- show a note referencing compliance with the applicable CSA standards, Union Gas Limited's Specifications for Pipeline Crossings and the National Energy Board Pipeline Crossing Regulations.
- date of the proposed crossing

64.3 Imperial Response

a. Imperial has been working with Enbridge to provide crossing agreement and permit drawings in a format requested by Enbridge. The information requested above has been previously submitted to Enbridge.

   In response to the Enbridge information request about construction equipment types, Imperial will provide information related to construction equipment types after a construction contractor has been selected and once the equipment selection has been finalized.

b. Imperial has been working with Enbridge for a crossing agreement . Imperial will comply with the crossing agreement request and requirements which should effectively meet the Schedule C standards outline above.

c. The planned construction timeframe is anticipated to be between Q4 2019 and Q4 2020, and is subject to permitting and regulatory approvals. Imperial Plans to share more detailed scheduled construction steps and durations. The Horizontal Direction Drills and Ministry of Transportation of Ontario area work may include evening construction, subject to required permits.

65. HALTON-1

65.1 Topic

Purpose, Need, Proposed Project and Timing

65.2 Reference

EB-2019-0007 – Imperial Oil Limited's Leave to Construct Application filed 2019-02-22 ("Application") Exhibit C, Tab 1, Schedule 2, Page 3, Figure 2.2-1: Waterdown to Finch Project Overview.

As illustrated by Figure 2.2-1, the Project proposes to cross the following Regional roads: Guelph Line, Appleby Line, Tremaine Road, Regional Road 25, Neyagawa Boulevard (future northerly extension), Trafalgar Road and Ninth Line.

65.3 Information Request

a. Please explain how Imperial Oil Limited ("Imperial") or its contractors will allow and address any future widening of Regional roads within the Project corridor?

b. Specifically, how is Imperial ensuring that the location and construction of the pipeline does not impact future widening activities (during construction and post-construction) such that the pipeline Project does not impede or restrict The Regional Municipality of Halton's ("Halton") ability to carry-out any future widening of Regional roads, including the future extension of James Snow Parkway to Neyagawa Boulevard which appears to cross the proposed pipeline? This would mean accounting for Regional roads being widened from 2 to 4 lanes or from 4 to 6 lanes, and resulting new road alignment, in addition to ultimate Regional right-of-way along the relevant sections of road (as per Halton's Official Plan, Transportation Master Plan and/or Environmental Assessment Study/Detail Design Study). For information, Halton Region's Transportation and Development and Non Development Capital Implementation Plan (2018-2031) is available on Halton's website.

c. Has the future Halton infrastructure project outlined in the Sustainable Halton Water and Wastewater Master Plan (2011), which appears to cross the proposed pipeline route, been considered as part of the Project study? Halton Region Project ID 6666 (planned construction start in 2031), a new 750 mm watermain to be constructed on Neyagawa Boulevard and the future extension of James Snow Parkway from Burnhamthorpe Road to Lower Base Line West?

d. Please provide details of the proposed plan and profile drawings along the proposed Neyagawa Boulevard alignment. These details are required to ensure adequate protection of both the proposed pipeline and the proposed 750 mm watermain.

e. Please provide details of the proposed plan and profile drawings along Trafalgar Road and Ninth Line. Although these roads fall under MTO jurisdiction and review, Halton has significant infrastructure in these areas and needs to ensure its protection.

65.4 Imperial Response

a. Imperial plans to use trenchless construction methods (HDD or bores) to cross all paved roads. The trenchless construction will extend a minimum of 7 m beyond the edge of the road Right-of-Way. This additional width is intended to support the potential need for future road widening construction without impacting the pipeline. Extra heavy wall thickness pipe is being used for all pipe on the Project; the strength of this pipe is suitable for road crossings.

b. The design outlined in response (a) above was selected to support the potential need for future road widening. As a typical lane is 3.0 to 3.5 m wide, the minimum extension of 7 m beyond the edge of the ROW would allow for upgrades from 2 lanes to 4 lanes or 4 lanes to 6 lanes without impacting the pipeline for areas such as the future extension of James Snow Parkway to Neyagawa Boulevard.

c. Near term infrastructure projects were considered in the Project planning. Imperial's proposed line will be designed to support future line crossing needs. Potential infrastructure that is many years out, such as the Halton Region Project ID 6666, were not considered in the detailed engineering, however Imperial is committed to further coordination discussions in support of future infrastructure growth.

d. Imperial is open to reviewing the proposed Neyagawa Boulevard alignment drawings once available to facilitate discussions around future line crossing needs. Imperial's pipeline alignment drawings in this area can be shared upon request.

e. Proposed plan and profile drawings along Trafalgar Road and Ninth Line are currently being developed and will be provided to the region once finalized.

66. HALTON-2

66.1 Topic

Land Matters

66.2 Reference

Application, Exhibit F (Land Matters), Tab 1, Schedule 1, Page 1 of 6, Summary of Land Matters, Paragraph 4

Tab 1, Schedule 6, Pages 1-143, Table 6-1: Land Line List

Table 6-1 is described as a Line List and sets out a list of properties that are impacted by the Project, along with associated Property Identification Numbers (PINs) and other property information. Portions of this table, specifically the columns entitled "Landowner (Geowarehouse)" and "Mailing Address", have been redacted.

Halton needs to have comprehensive information as to which Halton-owned properties may be impacted by the Project. Geowarehouse and/or the Land Registry Office may not show Halton as the owner of all Halton-owned properties, as Halton obtained ownership of certain lands through amalgamations, mergers and other municipal boundary adjustments from several smaller communities. As such, Halton is seeking information for impacted properties for which any of the entities listed below is recorded in Geowarehouse/LRO as owner.

In addition, Halton has pulled several of the PINs listed in Table 6-1 in Geowarehouse and found that they are inactive. Where PINs are inactive Halton needs to be provided with the new PIN.

66.3 Information Request

a. Please provide a complete and unredacted Land Line List table, including all of the categories of information set out in Table 6-1, for all of the following properties:

   ii properties for which any of the following landowners are recorded on title:

   - The Regional Municipality of Halton
   - The Corporation of the Regional Municipality of Halton
   - Township of Trafalgar
   - Township of Nelson
   - The Corporation of the City of Burlington
   - The Corporation of the Town of Oakville
   - The Corporation of the Town of Milton
   - The Corporation of the Town of Halton Hills
   - Township of Esquesing
   - Public Authority Having Jurisdiction

   iii properties that are in any of the following municipalities:

   - Burlington
   - Oakville
   - Milton

iv Properties for which the "Property Type" is either of the following

- Municipal (Public Road)
- Municipal (Surplus Lands)

v Under the table heading "PIN", please also state whether the PIN is active or inactive and, if inactive, please provide the new PIN.

vi Please confirm that the information provided in response to this question is a complete list of properties that will be impacted by the Project.

66.4 Imperial Response

a. Please see Appendix 17 for an updated Table 6-1 which addresses (i) through (v). This list is a complete list of properties currently affected by the Project. As the route is finalized this list may change and landowners will be updated of the requirements on their parcels.

67. HALTON-3.1

67.1 Topic

Record of Consultation

67.2 Reference

Application, Exhibit H, Tab 1, Schedule 1, Pages 5

Application, Exhibit H, Tab 3, Schedule 1, Pages 4, 29, 35 and 37

Imperial states that it invited communities to participate in an Emergency Response Exercise. Imperial also indicates that Halton, the City of Burlington, the Town of Milton, and the Town of Oakville were specifically invited to attend the exercise.

When asked to supply an Emergency Response Plan, Imperial's initial reply was that all Halton area Emergency Management Departments would be invited to attend its Emergency Response Exercise. No Emergency Response Plan was circulated and thus there was no ability to measure the efficacy of response processes during the exercise. Without the relevant plan, Imperial's invitation was considered incomplete and it did not justify Halton staff attendance. An invitation to attend an exercise is not a substitute for providing a valid, detailed, and specific Emergency Response Plan.

67.3 Information Request

b. Please provide an Emergency Response Plan that includes the previously requested information (see 3.1 below for additional information as to information requested).

67.4 Imperial Response

b. Keeping responders prepared and the pipeline safe is achieved by conducting simulated emergency response activities using realistic scenarios. In October 2018, Imperial simulated a diesel release into the Humber River in the Etobicoke area, which involved simulating response actions over two days of the exercise. The response included an incident command setup, staffed by Imperial's local operations team, Imperial and ExxonMobil's Americas Regional Response Team and municipal, provincial and federal agencies. Due to location, the City of Toronto was engaged in scenario planning and execution and representatives participated in the simulation. A day of training preceded the response simulation for all participants. Other municipalities along the pipeline right-of-way were invited to tour this large-scale exercise.

   Imperial acknowledges that exercises are only one aspect of emergency response. In June 2019, Imperial provided Halton with its general emergency response plan for fuels operations, its asset-specific emergency response plan for the Waterdown to Finch pipeline segment and the asset-specific spill tactics plans for major watercourses. Imperial also requested a meeting with the appropriate emergency services departments, which has been scheduled for August.

68. HALTON-3.2

68.1 Topic

Emergency Response Plan

68.2 Reference

Application, Exhibit H, Tab 2, Schedule 6, Page 13

Meeting with Imperial Oil June 27, 2018 and e-mail request of May 1, 2019.

Imperial indicates that its Emergency Response Plan prioritizes the protection of people and the environment.

During Halton's meeting with Imperial on June 27, 2018, Halton Emergency Management requested a copy of Imperial's Emergency Response Plan, in order to understand Imperial's process for notifying local agencies and affected parties and sharing information with respect to an emergency situation. Halton was also seeking to understand what emergency response responsibilities normally assumed by Halton or other emergency service providers would be assumed by Imperial in responding to a pipeline-related incident.

This request was reiterated in email correspondence to Imperial from Halton Emergency Management dated May 1, 2019. In response, Imperial provided some detailed information as to planned mitigation practices and spill control methods. This information did not, however, include the details with respect to incident notification, information sharing and assumed responsibilities. On June 25, 2019, Imperial provided Halton with an Emergency Response Plan. The Plan still does not include the requested information relating to incident notification, information sharing and assumed responsibilities.

68.3 Information Request

a. What is the status of an Emergency Response Plan that includes details with respect to incident notification, information sharing and emergency response responsibilities that will be assumed by Imperial and when will the updated Plan be provided to the Region?

b. Please confirm that Imperial will provide a representative to participate in a Regional or Local Emergency Operations Centre during an emergency event requiring the activation of a municipal Emergency Operations Centre.

68.4 Imperial Response

a. In June 2019, Imperial provided Halton its general emergency response plan for fuels operations, its asset-specific emergency response plan for the Waterdown to Finch pipeline segment and the asset-specific spill tactics plans for major watercourses. Imperial's Specific Contingency Plans: Spill - Low Vapour Pressure Pipeline document, which outlines the specific steps that are taken in the event of a spill incident, is provided in Appendix 3. Imperial is in the process of updating the company-wide emergency response documents and will update the asset-specific plans to reflect the new pipeline in advance of commissioning. These updated documents will be provided to the Halton Region when available.

b. In the event of an incident within Halton's jurisdiction, Imperial would provide personnel to assist in response coordination with the region and travel to the respective emergency operations centre upon request. Imperial maintains a 24-7 emergency phone number for pipelines (1-800-372-9597), which dispatches the local on-call employee to provide support and activate additional resources and third-party contractors. Imperial uses the Incident Command System to guide our response protocols and would evaluate the unique situation with Halton to establish an effective joint management approach for all aspects of the response.

69. HALTON-3.3

69.1 Topic

Financial Resources

69.2 Reference

Application, Exhibit H, Tab 1, Schedule 1, Page 8

Imperial states:

Imperial takes proactive safety measures to prevent spills. Imperial has a robust Emergency Response Plan. Regulations and government oversight dictate how Imperial prepares for and responds to a potential pipeline spill. Imperial would be responsible for cleaning up and mitigating damages.

In the event of a pipeline-related emergency incident, a large number of residents, properties and/or businesses could be impacted. The costs associated with recovery from such impacts are potentially significant.

69.3 Information Request

a. Please provide explicit confirmation that Imperial has the financial resources (including but not limited to insurance coverage) to pay for remediation costs, fines and penalties, among other costs associated with a pipeline-related emergency.

69.4 Imperial Response

a. Imperial carries third-party liability and property insurance appropriate for exposures related to its assets and operations. These insurers are selected on a competitive basis and must meet the company's standard requirement of a minimum financial rating of A- from S&P Global or equivalent. Further, Imperial holds a AA+ debt rating from S&P Global and has very strong capacity to meet its financial obligations in excess of its insurance coverage. In the event of specific insurance requests, Imperial will review the request and work with the requesting agency to seek a mutually acceptable resolution for type and evidence of coverage.

70. HALTON-4.1

70.1 Topic

Environmental Report – Clean up and Reclamation

70.2 Reference

Application - Environmental Report, Section 2.3: Project Construction Methods, Page 2-2

The Report states:

8. Clean-up and Reclamation: The ROW and temporary workspace (TWS) are reclaimed or restored to natural or pre-construction contours, and the native topsoil is replaced. In natural areas, restoration includes re-seeding the disturbed areas. In developed areas, restoration involves leaving the site in a condition suitable to resume agricultural activity or urban landscaping.

70.3 Information Request

a. Please confirm that restoration includes compensation and other activities in accordance with the Environmental Protection Plan and/or Reclamation Plan.

70.4 Imperial Response

a. Reclamation measures, compensation and other activities will be described in Imperial's Environmental Protection Plan (EPP) and associated Reclamation Plan.

71. HALTON-4.2

71.1 Topic

Environmental Report – Agricultural Areas

71.2 Reference

Application - Environmental Report, Section 4.1.1: Study Areas, Page 4-2 (Table 4.1-1: Local Study Areas Defined by Feature)

Application - Environmental Report, Section 4.4.1: Land Use Planning, Page 4-26

Table 4.1-1 does not set out a local study area relating to agriculture. Additionally, Section 4.4.1 of the Report states:

Infrastructure should also avoid prime agriculture areas where possible. Only linear infrastructure is to be developed in prime agricultural areas and is subject to an agricultural impact assessment or equivalent analysis.

An Agricultural Impact Analysis (AIA) has not been provided as part of the studies submitted to Halton. There are sections in the Environmental Report that discuss agricultural lands, however there is no complete assessment of the impacts this Project could/will have on the agricultural system and possible mitigation measures. Impacts that are discussed throughout the report do not consider the long term effects of disturbing the soil ecosystem.

71.3 Information Request

a. Please include agricultural area as a feature with a local study area in Table 4.1-1.

b. Please provide an assessment of the impact of the Project on agriculture (i.e. an Agricultural Impact Assessment).

71.4 Imperial Response

a. Agricultural features have been assessed in the OEB Environmental Report (ER) as sub-components of Soil and Socioeconomic features presented in Table 4.1-1 (see existing condition Sections 4.2.2 and 4.4.2; and effects assessment Sections 5.2.2 and 5.4.1). The net effects of the Project on access to and use of land will be limited to the construction footprint and only during construction. Generally, agricultural crops will be restored within one growing season. Compensation to affected landowners for decreases in farming output/revenue during this time are expected to fully mitigate this effect. Net adverse effects of the Project on existing agriculture are likely, but are considered to be not significant.

b. The text referencing an "agricultural impact assessment or equivalent analysis" originates from the Environmental Report Section 4.4.1 where the Project's consistency with the Niagara Escarpment Plan (2017) is discussed. Imperial has proactively consulted with the Niagara Escarpment Commission (NEC). In a letter to Imperial dated July 9, 2018, the NEC confirmed that infrastructure (including an oil and gas pipeline, i.e., the Project) is a permitted use in the NEP land use designations crossed by the Project. The NEC letter also listed development criteria that should be addressed through the Environmental Assessment process (i.e. OEB Environmental Report). Regarding agriculture, the NEC cited Policy Part 2.12.6 – Infrastructure, noting that NEC requested that efforts should be made during construction to confirm agricultural operations are not negatively impacted and are returned to an agriculture condition following construction. NEC requested that the Environmental Report shall include potential impacts on agriculture including mitigation measures. It is Imperial's position that the Project's potential effects on agriculture have been assessed in the Environmental Report (see existing condition Sections 4.2.2 and 4.4.2; and effects assessment Sections 5.2.2 and 5.4.1).

72. HALTON-4.3

72.1 Topic

Environmental Report – Woodlands

72.2 Reference

Application - Environmental Report, Section 4.3.1.3: Woodlands, Pages 4-16 & 4-17

72.3 Information Request

a. Why is there is no figure provided showing woodlands and significant woodlands? Please provide a figure showing woodlands and significant woodlands. Within the Halton Region portion of the Project corridor, these features should be identified in accordance with the definitions contained in the Halton Region Official Plan (Sections 295 and 277).

72.4 Imperial Response

a. Woodlands and significant woodlands are identified on the map included in this response (Appendix 18). Woodland and significant woodland definitions from the Natural Heritage Reference Manual and the Halton Region Official Plan were applied to those woodlands within Halton Region.

   Woodlands WO3 through WO23 are located within Halton Region.

   Woodlands WO3, WO4, WO5/WO6, WO8/WO9, WO10, WO11, WO12, WO15/WO16, WO18, WO19, WO20/WO21, WO22/WO23 are considered significant, as indicated on Table 4.3-3 in the Environmental Report.

   Woodlands WO7, WO13, WO14 and WO17 did not meet the criteria thresholds for significance (Halton Region Official Plan) and are discussed further below.

   Woodlands WO13, WO14 and WO17 are less than 0.5 ha in size and therefore are too small to be considered significant woodlands.

   As discussed in the ER, WO7 is approximately 2.4 ha and comprises open cultural woodland and cultural plantation. This woodland is located above the Escarpment and needs to be a minimum of 10 ha to be considered a significant feature; it is below the 10 ha threshold and is therefore not a significant woodland.

73. HALTON-4.4

73.1 Topic

Environmental Report – Mapping from Regional Office Plan

73.2 Reference

Application - Environmental Report, Section 4.4.2: Existing Land Use, Page 4-28

The Report states:

Official Plan for the Regional Municipality of Halton: This outlines a long-term vision for Halton's physical form and community character, as well as policy positions to be required in the Official Plans and Zoning By-laws of Burlington, Oakville, Milton and Halton Hills. The Region provides direction on matters such as management of land and natural resources, housing development, provision of services, community growth and economic development. Local municipalities direct development in accordance with local desires while adhering to the overall planning vision for Halton and policies of the plan (Halton 2018).

73.3 Information Request

a. Why does the Environmental Report not include mapping from the Halton Official Plan? Please include in the Environmental Report a description of Halton Region Official Plan (ROP) designations and overlays that apply to the Project corridor, including but not limited to Regional Natural Heritage System (RNHS) designation, Greenbelt Natural Heritage System (GBNHS) overlay and Agricultural Area designation. The Environmental Report mentions the ROP, but makes no mention of the Natural Heritage System lands within the Project corridor. The RNHS and GBNHS should be described in Section 4.4.2 (Existing Land Use) as ROP designations and overlays that contain important environmental protection polices which should be considered in relation to impact avoidance and mitigation.

73.4 Imperial Response

a. The Environmental Report (Section 4.0) summarizes publically available natural heritage data and results of Project-specific field surveys within Halton Region, including natural heritage mapping associated with the Halton Official Plan. Section 4.4 of the E R includes a summary of specific land use policies, within the Project area including the Greenbelt and agricultural areas and areas of natural and scientific interest and other natural heritage system features, which are determined to be significant by the Province. Mapping of Greenbelt, Natural Heritage System features, and agricultural areas is provided in Figure 4.4-1. The effects assessment in the ER considered these policies in the Project's avoidance and mitigation planning.

   Detailed mapping of information not within the public domain (e.g., Species at Risk occurrences and habitat) was not included in the Environmental Report due to certain sensitivities and will be provided within permit applications with the appropriate regulators (e.g., Fisheries and Oceans Canada, Ministry of Environment Conservation and Parks).

74. HALTON-4.5

74.1 Topic

Environmental Response – Tile Drainage

74.2 Reference

Application - Environmental Report, Section 5.2.2: Soil, Pages 5-3 & 5-4

The Report states:

Drain tiles are subsurface structures used in some agricultural areas to improve the productivity of the land by increasing drainage of soils. Drain tile damage could occur by operation of heavy construction equipment causing rutting in wet soils, and during excavation of the pipeline trench, as most drain tiles are installed at a depth shallower than the planned trench depth. Imperial will consult with landowners prior to construction to identify and/or repair any drain tiles or irrigation systems that would be affected by the Project.

74.3 Information Request

a. Please confirm that Imperial will identify land parcels with tile drainage and the location of drain tiles in advance of construction in order to avoid damage and to minimize any negative long term impacts.

b. Please refer to and incorporate the Ontario Ministry of Agriculture, Food and Rural Affairs tile drainage records that can be downloaded to determine what areas may be susceptible to drain tile damage before construction is commenced. Tile drainage plays a valuable role in the agricultural system, causing water to drain from the land thereby impacting productivity and yields.

74.4 Imperial Response

a. Imperial will work with landowners to identify land parcels with tile drainage and the locations of drain tile in advance of construction. If tile drainage is impacted as a result of construction, Imperial will work with the landowners to repair the tile drainage. To date, landowners have not raised any concerns related to drain tile.

b. Prior to construction, Imperial will review public drainage records to preliminarily identify lands with drainage systems. Imperial will use that information in discussions with landowners to identify and/or repair any drain tiles or irrigation systems that would be affected by the Project.

75. HALTON-4.6

75.1 Topic

Environmental Report – Agricultural Soils

75.2 Reference

Application - Environmental Report, Section 5.2.2: Soil, Page 5-4 and Page 5-5 (Table 5.2-2: Potential Effect, Key Mitigation Measures, and Net Effects on Soil)

The Report states:

Soil compaction modifies the structure and reduces the porosity and moisture-hosting capacity of soils. Construction equipment travelling over wet soils could disrupt the soil structure, reduce pore space, increase runoff potential, and cause rutting. The degree of compaction depends on moisture content and soil texture. Fine-textured soils with poor internal drainage that are moist or saturated during construction are the most susceptible to compaction and rutting. Compaction impacts will be mitigated through the use of deep tillage operations during restoration activities using a paraplough or similar implement. In areas where topsoil segregation occurs, plowing with a paraplough or other deep tillage implement to alleviate subsoil compaction will be conducted before replacement of the topsoil.

Clearing, grading, and equipment movement could accelerate the erosion process and, without adequate protection, result in discharge of sediment to waterbodies and wetlands. Soil loss due to erosion could also reduce soil fertility and impair re-vegetation. Temporary erosion controls will be installed prior to initial ground disturbance and maintained throughout construction. Imperial will complete final cleanup as soon as practical after construction, weather and soil conditions permitting. In no case will restoration of an area be delayed beyond the next available seeding season. Except in active agricultural areas, temporary erosion control devices will be maintained until the footprint is re-vegetated successfully. Following successful re-vegetation of construction areas, temporary erosion control devices will be removed.

75.3 Information Request

a. Please provide an assessment that recognizes and takes into consideration the potential for additional losses to cash crop operations as a result of soil compaction and erosion.

b. Please provide an examination of historical yield data and average production data in order to provide a baseline for analyzing and tracking future impacts to yield and production.

c. Please amend and update Table 5.2-2 to address the long term effects associated with disturbance of the soil, compaction and erosion over multiple years on yield particularly with cash crop operations.

d. Please explain how Imperial will compensate farmers for reduced yields resulting from disturbance of the soil, compaction and erosion until the time that lands return to the pre-construction productivity levels.

75.4 Imperial Response

a. Imperial recognizes that crop yield could be impacted due to soil compaction and erosion. However, as stated in section 5.2.2 of the ER, compaction impacts will be mitigated through the use of deep tillage operations during restoration activities using a paraplough or similar implement. In areas where topsoil segregation occurs, plowing with a paraplough or other deep tillage implement to alleviate subsoil compaction will be conducted before replacement of the

topsoil. Temporary erosion controls will be installed prior to initial ground disturbance and maintained throughout construction. Except in active agricultural areas, temporary erosion control devices will be maintained until the Project footprint is re-vegetated successfully. Imperial will continue to consult with and address landowner concerns during pipeline operation.

b. Imperial reviewed historical data from OMAFRA. Imperial is compensating farmers with a lump sum payment for crop loss as a result of construction. Compensation is paid to landowners prior to construction commencing and includes compensation to cover five years' worth of reduced yields. If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigations. During construction, Imperial will strip the topsoil prior to stripping the subsoil and keep the topsoil separate from the subsoil. Once construction is complete, Imperial will place the subsoil back followed by the topsoil to help minimize future yield reductions.

c. Following construction, Imperial will de-compact soil and return to pre-existing conditions in agricultural areas. Imperial will continue to consult with and address landowner concerns during pipeline operation.

d. The net effects of the Project on access to and use of land will be limited to the construction footprint and only during construction. Generally, agricultural crops will be restored within one growing season. Imperial will pay compensation for a five year period to affected landowners for decreases in farming output/revenue during this time which is expected to fully compensate for any losses. If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigations.

76. HALTON-4.7.1

76.1 Topic

Environmental Report – Water – Ground Water Supply and Wells

76.2 Reference

Application - Environmental Report, Section 5.2.3: Groundwater, Page 5-6 and Appendix H, Page 1-7

The Report states:

Rural agricultural areas are often supplied by domestic ground water supply wells that may be affected by construction activities.

Of the 87 well in the LSA, eight (8) water supply wells are completed to a depth of less than 20m and have a depth to water of less than 4mBGS…

76.3 Information Request

b. Please describe measures that will be taken to identify on-farm water sources that could be affected and measures that will be taken to avoid disruption of those services to households and farms.

c. It is not clear where data from Appendix H was obtained as there does not appear to be a reference. Please provide verification as to source of well water information and that there was cross reference to water well information from https://www.ontario.ca/environment-and-energy/map-well-records.

d. Please provide a plan for providing water to such households and farms in the event of an interruption. Special consideration needs to be given to any livestock operations in the Project area or other forms of agriculture that require irrigation.

e. Please confirm that Appendix H contains complete information with respect to all wells within the Project corridor, and provides references indicating the sources of the data.

76.4 Imperial Response

a. To identify on-farm water sources that could be affected by the Project, up-to-date well records will be reviewed prior to a planned 2019 pre-construction well survey. Measures to be taken to avoid disruption of water sources for households and farms may include seasonally planning construction activities to minimize dewatering requirements, as practical.

b. The reference to the data in Appendix H is provided as a footnote citing "Source: https://www.ontario.ca/environment-and-energy/map-well-records, October 18, 2018".

c. Imperial will commit to supplementing well water to households and farms in the event of an interruption during construction. Any supplemental water, for purposes including but not limited to domestic use, livestock and irrigation, will be of quality and quantity equal to or greater than existing sources. The process to supplement water will be described in the EPP.

d. As per the above responses, the well information contained in Appendix H will be reviewed and updated with pre-construction well survey information prior to construction. Any additional information sources will be referenced accordingly in Project records.

77. HALTON-4.7.2

77.1 Topic

Environmental Report – Water Monitoring

77.2 Reference

Application Environmental Report, Section 5.2.3: Groundwater, Page 5-6 and Appendix H, Page 1-7

The Report states *"…Imperial is proposing to monitor depth to water and water quality pre-construction and post-construction, pending landowner permission and accessibility of the wells."*

77.3 Information Request

a. Please include appropriate maps showing location of all wells within Halton Region that are within the Project corridor. Best efforts should be made to correlate MOECP's Water Well Records to existing rural lots and buildings in Halton Region.

b. Please confirm that Halton will be provided with a well survey in advance of construction of each segment of the pipeline in Halton Region in order to establish status, conditions, and current use of existing wells and to determine water level variations (preferably utilizing data loggers) at each active and accessible well. The monitoring of active residential wells must continue during and post-construction. A licensed well contractor must be retained for the purpose of accessing private wells. Where no access to residential wells is available, suitable monitoring wells should be established to monitor a zone-of-influence adjacent to any planned dewatering works in rural areas serviced by residential wells. Where feasible and warranted, adjustments/repairs to active residential water supply wells should be undertaken by a licensed well contractor to prevent long-term negative effects caused by the Project (i.e. if such effects are a possibility based on local conditions' assessment).

77.4 Imperial Response

a. Maps showing all wells within Halton Region that are within the Project study area will be prepared as part of a pre-construction well survey intended to assess groundwater uses at existing rural lots and buildings in Halton Region within the Project study area. The MECP's well records are one source of well location data that will be used to prepare the maps.

b. A well survey will be completed in advance of construction of the Project. Landowners with domestic well supplies will be contacted to request permission for pre-construction monitoring that would include water quality sampling and/or water level measurements dependent on accessibility of the well. Post-construction well monitoring will be done at the request of the landowner.

   Predicted water drawdown and a zone of influence was assessed in support of the Water Taking Permit application. Potential impacts from construction dewatering activities include a short term reduction in water levels for any water sources located within the zone of influence. However, negative effects requiring adjustments or repairs to wells are not anticipated due to the short duration of the work. A Communication Plan will be developed prior to construction and will include the protocol for addressing any landowner concerns related to impacts to groundwater wells.

78. HALTON-4.7.3

78.1 Topic

Environmental Report – Water – Mitigation

78.2 Reference

Application - Environmental Report, Section 5.2.3: Groundwater, Page 5-7 (Table 5.2-3: Potential Effect, Key Mitigation Measures, and Net Effects on Groundwater)

78.3 Information Request

a. Please incorporate key mitigation measures for groundwater-related matters into Environmental Protection, Management and Contingency Plans since key mitigation measures for potential effects on groundwater quality and quantity (per Table 5.2-3) are not mentioned in Section 7-Environmental Protection, Management, and Contingency Plans.

78.4 Imperial Response

a. Key mitigation measures for groundwater-related matters will be addressed in the Environmental Protection Plan (EPP) and associated Water Management Plan.

79. HALTON-4.8

79.1 Topic

Environmental Report – Soil Compaction

79.2 Reference

Application - Environmental Report, Section 5.3.1: Vegetation and Wetlands, Page 5-10

The Report states:

Activities such as the movement and storage of large equipment and stockpiling of material may also result in compaction of soils, which may impair vegetation re-growth. The extent of soil compaction will be assessed as a component of restoration works, with remediation measures, such as soil discing, to occur as needed.

79.3 Information Request

a. Please provide how Imperial will analyze and address the potential long-term negative effects of soil discing as a remediation measure, as it can disturb the soil ecosystem and affect the microbial activity and productivity of the soil for multiple years.

b. Please provide a mitigation plan and explain how Imperial will compensate farmers for reduced yields resulting from soil discing until the time that lands return to the pre-construction productivity levels.

79.4 Imperial Response

a. Ripping, discing, or similar methods are proposed to mitigate against soil compaction from construction. Compacted soil can impair vegetation re-growth and create conditions where the soil becomes "rough" and "loose" through some type of mechanical disturbance will allow for better restoration outcomes. Ripping, discing, or similar methods, as mitigation, are not intended to be a persistent and ongoing activity, but rather an activity that will be conducted "as needed" to reduce soil compaction such that areas can be reclaimed and revegetated. Discs are among the most widely adopted fall tilling methods in Ontario (OMAFRA, 2017).

b. The net effects of the Project on access to and use of land will be limited to the construction footprint and only during construction. Generally, agricultural crops will be restored within one growing season. Imperial will pay compensation for a five year period to affected landowners for decreases in farming output/revenue due to soil discing during this time which is expected to fully compensate for any losses. If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigations.

80. HALTON-4.9

80.1 Topic

Environmental Report – Agricultural Productivity and Compensation

80.2 Reference

Application - Environmental Report, Section 5.3.1: Vegetation and Wetlands, Page 5-12

The Report states:

Generally, agricultural crops will be restored within one growing season of construction and the restoration of other anthropogenic vegetation (particularly landscaped areas and cultural vegetation communities) or natural vegetable and wetlands will occur within three years of construction, which is expected to effectively reverse the net effects of the Project on vegetation and wetlands.

80.3 Information Request

a. Please explain how actual crop yields/productivity of the restored areas will be monitored over the long term, Agricultural crops may be restored within one growing season but it can take 4 to 7 years to obtain the level of productivity from the fields that was occurring in advance of the Project due to the disruption of the soil ecosystem.

b. Please explain how Imperial will address and compensate farmers for reduced yields resulting from disruption of soil until the time that lands return to the pre-construction productivity levels.

80.4 Imperial Response

a. Within one growing season of construction, all agriculture activities including cultivation and harvesting of crops will be able to occur as done prior to construction. However, it is acknowledged that there may be instances where for some locations and crop types the productivity of the soil takes longer to recover to a pre-construction condition, resulting in an impact on yields and incomes that extend beyond one growing season.

   Imperial does not have plans to monitor crop yields or productivity of the impacted areas over the longer term. Imperial believes that the farmers are best able to document any changes in crop yields, and make any necessary adjustments to their farming activities in the best interest of their business.

b. The net effects of the Project on access to and use of land will be limited to the construction footprint and only during construction. Generally, agricultural crops will be restored within one growing season. Imperial will pay compensation for a five year period to affected landowners for decreases in farming output/revenue from disruption of soil during this time which is expected to fully compensate for any losses. If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigation.

81. HALTON 4.10

81.1 Topic

Environmental Report – Reclamation Plan

81.2 Reference

Application - Environmental Report, Section 5.3.1: Vegetation and Wetlands, Page 5-11 (Table 5.3-1: Potential Effect, Key Mitigation Measures, and Net Effects on Vegetation and Wetlands)

81.3 Information Request

a. Please confirm that the Reclamation Plan to address direct removal of vegetation required to support pipe installation will be prepared to the satisfaction of Halton and other relevant municipalities and conservation authorities.

81.4 Imperial Response

a. Imperial can confirm that the Reclamation Plan will address direct removal of vegetation required to support construction of the Project and can be provided to Halton and other relevant municipalities and Conservation Authorities (i.e., Toronto and Region, Credit Valley, Halton and Hamilton).

82. HALTON-4.11

82.1 Topic

Environmental Report – Mitigation Measures for Vegetation and Wetlands

82.2 Reference

Application - Environmental Report, Section 5.3.1: Vegetation and Wetlands, Page 5-11 (Table 5.3-1: Potential Effect, Key Mitigation Measures, and Net Effects on Vegetation and Wetlands) and Page 5-12

The Report states:

Trenchless methods are proposed for all provincially significant wetland communities. [Table 5.3-1] …

Many areas of sensitive vegetation and wetlands in the Project footprint will be avoided by using trenchless construction. The areas of the Project footprint cleared of vegetation will be restored to best match existing conditions. [Page 5-12]

82.3 Information Request

a. Please confirm that mitigation measures described will be applied to all wetlands and sensitive vegetation communities and not just provincially significant wetlands. In the document as written there is some here is some inconsistency between mitigation measures described in Table 5.3-1 and the summary contained in text in the subsequent paragraph (on p. 5-12). In Table 5.3-1, it is noted that trenchless construction methods are proposed for all provincially significant wetland communities (with no mention of other wetlands or vegetation communities). In the subsequent paragraph it is noted that many areas of sensitive vegetation and wetlands in the Project footprint will be avoided by using trenchless construction.

82.4 Imperial Response

a. Imperial will use HDD or bore trenchless pipeline installation methods for all provincially significant wetlands (PSWs) identified through provincial mapping as of December 2018.

   Unevaluated wetland communities were also identified, in addition to known and mapped PSWs, along the pipeline route, using provincial mapping and review of orthophotography, with presence confirmed during field inventories. While a full Ontario Wetland Evaluation System (OWES) classification was not completed on each field-identified unevaluated wetland, some unevaluated wetland units were conservatively complexed into adjacent provincially mapped PSWs due to their proximity and hydrological connectivity (refer to Table 4.3-2 of the ER). The remaining unevaluated wetlands (those not within 750 m of a PSW and/or not hydrologically connected) are small, isolated meadow marsh communities that are considered relatively resilient to disturbance and are expected to re-establish within one to three years following completion of construction. Any planned trenched construction work within these unevaluated wetlands will be completed under the requirements of relevant Conservation Authority permit conditions. These areas within the Project footprint will be restored to best match existing conditions.

83. HALTON-4.12

83.1 Topic

Environmental Report – Wildlife and Wildlife Habitat Restoration

83.2 Reference

Application - Environmental Report, Section 5.3.2: Wildlife and Wildlife Habitat, Page 5-15 (Table 5.3-2: Potential Effect, Key Mitigation Measures, and Net Effects on Wildlife and Wildlife Habitat)

Restoration and/or compensation of wildlife habitat is proposed to be completed post-construction as a key mitigation measure to address potential effects on wildlife and wildlife habitat required to support pipe installation. Further, it is indicated that this mitigation measure will be planned in consultation with conservation authorities and MNRF.

83.3 Information Request

a. Please confirm that Halton and other relevant municipalities will be consulted in relation to this matter.

83.4 Imperial Response

a. Imperial can provide Halton Region and the relevant municipalities with public regulatory application submissions to Conservation Authorities. Imperial is consulting with the Ministry of Environment, Conservation and Parks regarding avoiding and mitigating effects on Species at Risk (SAR) and SAR habitat under the Ontario *Endangered Species Act*.

84. HALTON-4.13

84.1 Topic

Environmental Report – Net Impacts on Agricultural Productivity

84.2 Reference

Application - Environmental Report, Section 5.4.1: Agriculture, Page 5-26

The Report states:

The net effects of the Project on access to and use of land will be limited to the construction footprint and only during construction. Generally, agricultural crops will be restored within one growing season. Compensation to affected landowners for decreases in farming output/revenue during this time are expected to fully mitigate this effect. Net adverse effects of the Project on existing agriculture are likely but are considered to be not significant.

84.3 Information Request

a. Please provide an Agricultural Impact Assessment Report to provide a more fulsome analysis of the impacts of the Project and mitigation measures to be put in place. Regional Guidelines on Agricultural Impact Assessments describe the elements that need to be included in the report (https://www.halton.ca/getmedia/80018b1c-0530-49cd-944d-7c1e48152dee/LPS-rop-guidelines-aia-guidelines.aspx)

b. From an agricultural perspective, the impacts of the Project have long-term effects on the productivity of the soils as the soil ecosystem is altered (bacterial, fungal activities etc.) well beyond one year. Decreases in yield will directly affect farming operations for a number of years and can affect farm viability. Please confirm that a compensation agreement will be established with any farming operations in the Project area. Yield averages and historical information on individual parcels should be used to gauge any long-term changes that arise in association with the Project. This analysis can be done in consultation with The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and local chapters of the Ontario Federation of Agriculture.

c. Restoration of crops is only one factor. Soil compaction, soil erosion, devastation of the soil ecosystem, ability to hold water (altered by the organic matter in the soil and particle size and soil type) all impact on yield which can have a significant effect and directly affect revenues for a farmer over multiple years. Please explain how these factors will be monitored, analyzed and addressed over the long term. Please explain how Imperial will address and compensate farmers for reduced yields until the time that lands return to the pre-construction productivity levels.

84.4 Imperial Response

a. Under the Halton Region Official Plan (December 16, 2009), Section 192, the preparation of an Agricultural Impact Assessment (AIA) Report may be required for certain development projects, where there is a land use decision to be made by the municipal government and there is the potential for the development to impact the agricultural resource.[1,2] The decision regarding the

[1] Halton Region Official Plan. Accessed July 16, 2019 at: https://www.halton.ca/Repository/ROP-%E2%80%93-June-19,-2018-Office-Consolidation-%E2%80%93-Text

[2] Halton Region. Agricultural Impact Assessment (AIA) Guidelines. Version 1.0 dated June 18, 2014. Regional Official Plan Guidelines. Accessed July 16, 2019 at: https://www.halton.ca/getmedia/80018b1c-0530-49cd-944d-7c1e48152dee/LPS-rop-guidelines-aia-guidelines.aspx

requirement for an AIA is determined as part of a planning application review. However, the Project is not considered "development" according to the definition in the Provincial Policy Statement 2014 and a review under the Halton Region Official Plan is not required. Imperial has prepared the Environmental Report to support its application to the OEB for a Leave to Construct as regulated under the *Ontario Energy Board Act* (S.O. 1998, c. 15, Sched. B), and the Environmental Report is consistent with the OEB's *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario* (7th Edition, 2016). Imperial asserts that the level of analysis presented in the Environmental Report is sufficient for its application to the OEB, and that additional analysis, including an AIA Report, is not required. Currently, landowners farm over portions of Imperial's existing pipelines and will continue to be able to do so post construction for the Project.

b. Compensation agreements will be established with farming operations directly affected by the Project.

c. Imperial will pay compensation for a five year period to affected landowners for decreases in farming output/revenue during this time which is expected to fully compensate for any losses. If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigations.

85. HALTON-4.14

85.1 Topic

Environmental Report – The Potential Adverse Impacts of the Project on Agriculture

85.2 Reference

Application - Environmental Report, Section 5.4.1: Agriculture, Page 5-25

The Report states:

> *The potential adverse effects of the Project on agriculture are predicted to be:*
>
> - *Restricted access to land and use of agricultural land; and*
> - *Disturbance to farming and livestock operations.*
>
> *Restricted access to, and use of, agricultural land and agricultural activities can result in reduced agricultural output and revenue for affected landowners. The Project footprint will cross 23.46 km of prime agricultural land, including approximately 12 km of farmed land, of which wheat, soybeans, and corn are most prevalent. The footprint also crosses 13.05 km of pastures and forages that can serve as areas for grazing animals or sources of grass or hay for horses and cattle.*

There are concerns about restricted access and when this might occur. Farm machinery needs access to roads particularly during spring planting and harvesting (April to November), although there are instances where corn can still be harvested throughout the winter months. Any delays in the Project could result in larger impacts on the agricultural community as this could infringe on key times where access is needed to adjacent fields in order to seed, spray or harvest a crop. This could compromise farming revenue and should be considered.

It should also be noted that agricultural production requires large machinery to access fields in the area. Any narrowing or closures of roads needs to take into account the ability of such vehicles to access lands through existing or alternate routes.

In addition, depending on the farm set up, access to pastures for grazing animals could be compromised. Any reductions in hay yield as a result of soil disturbance (which could have an impact over a number of years) or access to pasture (that could require hay supplementation to livestock to meet their nutritional needs) has financial implications for farmers.

85.3 Information Request

a. Please provide a contact that can respond to any concerns from the agricultural sector.

b. Please explain how Imperial will accommodate access needs of large farm equipment, which may conflict with construction activities and which equipment may need to cross Imperial's work area if there is no alternative access to agricultural lands.

c. Please provide details as to how the impact of restricted access to pastures for grazing animals will be mitigated, particularly in situations where there is no option available to move animals to other areas for grazing. How will this be addressed?

d. Please provide details as to how the financial implications for farmers that may result from reductions in hay yield and/or reductions in access to pasture will be remedied.

85.4 Imperial Response

a. Imperial is currently developing a Communication Plan that will be implemented prior to construction that will identify an individual who will be responsible for addressing concerns from the agricultural sector. This contact information will be provided to Halton Region. Prior to construction, any agricultural-related concerns can be sent to the Project email or phone number, and will be directed to the person who is best able to address the concern.

   Alternatively, if landowners have inquiries about their specific parcels they can reach out to their land agent representative who they are currently working with on the Project. The land agent will work with Imperial to address and determine mitigations for any concerns landowners may have.

b. As detailed in Table 5.4-1 (Section 5.4.1, page 5-26) key mitigation for the potential effect of restricted access to land and use of land includes: communication of access to properties and construction activities in advance of any planned work; maintaining sufficient breaks in soil windrows during planting and harvesting season to permit landowner access to adjacent fields; communication with affected landowners in advance of any reduced or restricted access; and containing all work within agreed right-of-way and construction workspaces. This mitigation includes accommodating access needs of large farm equipment, to the extent possible. If Imperial is unable to accommodate reasonable access across the construction footprint, Imperial will work with landowners to compensate for stranded lands that cannot be farmed. Imperial will continue to maintain open lines of communication during the construction phase and will work cooperatively with farmers to avoid or minimize any impacts on farming activities.

c. If Imperial's construction activities restrict access to pastures for grazing animals where there is no option to move animals to other areas for grazing, Imperial will compensate the landowner to purchase food for the grazing animals for the duration access is restricted.

d. Imperial will pay compensation for a five year period to affected landowners for decreases in farming output/revenue during this time related to reductions in hay yield and/or reductions in access to pasture. This compensation is expected to fully compensate for any losses.
   If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigation.

86. HALTON-4.15

86.1 Topic

Environmental Report – Monitoring and Mitigation Plan Long-Term Agricultural Impacts

86.2 Reference

Application - Environmental Report, Section 5.4.1: Agriculture, Page 5-26 (Table 5.4-1: Potential Effect, Key Mitigation Measures, and Net Effects on Agriculture)

The table states that *"Imperial will prepare ROW plans and easement agreements that will help to determine compensation for decrease in farming output/revenue."*

86.3 Information Request

a. Please provide a plan for monitoring and mitigating potential long-term impacts of the Project on productivity until the time that lands return to the pre-construction productivity levels.

b. How does Imperial intend to compensate farmers for any decreased yields until the time that lands return to the pre-construction productivity levels?

86.4 Imperial Response

a. Imperial does not intend to monitor the ROW post-reclamation as compensation will been paid in advance to landowners for 5 years' worth of damages. Imperial anticipates yields to be back to full yields within one to three years. If landowners advise of impacts after the five year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigation.

b. The net effects of the Project on access to and use of land will be limited to the construction footprint and only during construction. Generally, agricultural crops will be restored within one growing season. Imperial will pay compensation for a five year period to affected landowners for decreases in farming output/revenue during this time which is expected to fully compensate for any losses. If landowners advise Imperial of yield reductions after the 5 year term, Imperial will work with them to assess the concerns at that time to determine appropriate mitigation.

87. HALTON-4.16

87.1 Topic

Environmental Report – Traffic Management Plan for Regional Roads

87.2 Reference

Application - Environmental Report, Section 5.4.2: Residents and Businesses, Page 5-26

Changes in local traffic patterns (e.g., road or lane closures) could be expected if delivery of construction supplies or equipment is necessary, or if construction activity close to a roadway obstructs access to residential properties and businesses. Lane closures and traffic disruptions must be applied for through the Municipal Consent process.

87.3 Information Request

a. Please confirm that Imperial will prepare and submit to Halton, a detailed Traffic Management Plan for review and approval for the access to and from each Regional Road.

87.4 Imperial Response

Imperial will prepare a Traffic Management Plan to limit public impact and enhance safety and communications during Project construction. This will be provided to the region a minimum of 30 days prior to construction.

88. HALTON-4.17

88.1 Topic

Environmental Report – Process for Construction on Regional Roads

88.2 Reference

Application - Environmental Report, Section 5.4.5: Linear Infrastructure, Page 5-31

Imperial states that trenchless installation methods will be used to avoid damage to roads and railroads.

88.3 Information Request

a. Has sub-surface utility investigation been completed to confirm watermain and sanitary main elevations? Please provide details within cross section/Plan & Profile drawings, in order that the adequacy of the investigations can be determined by the Region with respect to Regional Roads.

b. In order to protect Regional linear infrastructure, please confirm that consent for the completion of works at each Regional road crossing will be sought through a Municipal Consent Application process.

c. Please confirm that each access point to the Project off a Regional Road will be undertaken through the Entrance Permit Application process

d. Please confirm what type/material of pipe used under roads, creeks or railways differ in diameter, wall thickness, etc. from other portions of the pipeline? Will the pipeline be installed within a casing?

88.4 Imperial Response

a. A subsurface utility investigation has been performed. The quality of the data (per ASCE 38-02) is as follows:

   - Utilities located by survey are QL-B.
   - Deep utility data purchased is QL-D.
   - Deep utility data purchased that is field verified by an above ground feature is QL-C.

   Imperial has been working with upper and lower tier municipalities for crossing agreements. Permit drawings, including cross section, plan and profile views will be submitted to the region as part of these packages. Physical investigation by the construction contractor will be performed prior to construction.

b. Imperial will seek consent for the completion of works at each Regional road crossing through a Municipal Consent Application process.

c. Imperial will seek an Entrance Permit for each access point to the Project off a Regional road through the Entrance Permit Application process.

d. The same extra heavy wall thickness carbon steel pipe will be used under roads, creeks and railway crossings as will be used on the main pipeline. Pipe that is to be installed above ground will be 12" diameter seamless pipe with 11.9 mm wall thickness and Steel Grade 448Q while below ground pipeline will be 12" diameter High Frequency Welded (HFW) pipe with 11.9 mm wall thickness and Steel Grade 448M. The pipe was designed in accordance with API 1161 for crossings without the need for casing pipe.

89. HALTON-4.18

89.1 Topic

Environmental Report – Water Management Plan

89.2 Reference

Application - Environmental Report, Section 7: Environmental Protection Management and Contingency Plans, Page 7-2

The Report states:

> *Water Management Plan*
>
> *The Water Management Plan will support implementation of conservation measures to reduce water use during construction and identify water taking requirements and water discharge methods and locations. The Plan will outline mitigation measures for working around water wells, shallow groundwater and unconfirmed aquifers, and protection measures in the area of dewatering discharge locations. The Plan will also address the management of water for drilling and hydrostatic testing.*

Although the new pipeline is planned within the corridor occupied by the existing pipeline, subsurface conditions at a local scale are not known. Influence of new excavation, dewatering, and construction can only be determined once local scale investigation is undertaken and then refined after construction has commenced. Certain features along the construction route in Halton Region may act as substantial subsurface water reservoirs (e.g. buried channels/meanders, etc.). Interception of such features during construction works may prompt a need for significant dewatering requirements, which could result in greater than anticipated impacts to local groundwater resources.

89.3 Information Request

a. Please confirm that the water components in the future Environmental Protection Plan (EPP) will go beyond the water management plan outlined in Section 7 of the Report and incorporate, among other things, a comprehensive groundwater protection, management and mitigation plan to ensure that proper assessment takes place and corrective actions are implemented (as required) for each segment along the construction route in Halton Region. Please confirm that the monitoring, contingency, and mitigation actions will be clearly defined in the future EEP.

b. Please confirm that the groundwater protection, management and mitigation plan will include the following:

- a flow chart depicting step-by-step course of action to assess, protect and/or manage groundwater quality and quantity along the pipeline construction route;
- a chart outlining roles/responsibilities/decision-making process and contact information for any enquiries;
- a system for notifications to agencies on any complaints from public; and
- details as to how such complaints will be addressed (including timelines) and protocol for reporting on corrective actions undertaken.

c. Please confirm that the EEP will be inclusive of on-going communication commitments with applicable agencies, so that as new information is collected along the Pipeline corridor, the

groundwater protection, management, and mitigation plan is refined in collaboration with applicable agencies.

d. Please confirm that, as part of the EPP, Imperial will develop a strategy to secure the new construction zone from any potential cross-contamination related to the existing pipeline, which is to be deactivated. This should be inclusive of any potential soil and groundwater remediation activities that might be required along the new pipeline route in relation to such contamination

e. Please confirm that adequate assessment of subsurface conditions along the planned route in Halton Region will be carried out ahead of any detailed construction design. Imperial Oil should engage reputable experts, including members of Professional Geoscientists of Ontario (PGO) or Professional Engineers Ontario (PEO) qualified to practice professional geoscience (including hydrogeology) in Ontario, to carry out and/or oversee any hydrogeologic investigations along the planned pipeline construction route in Halton Region. The assessment of subsurface conditions, including drilling, soil sampling, monitoring well installations, water quality and quantity monitoring programs, assessment and delineation of high permeability zones and local groundwater flow, dewatering and water disposal estimation, water budget analysis, etc. and any required reporting to agencies, should be carried under direction and oversight from qualified hydrogeologic consultants.

f. Please confirm that any management and mitigation plans will be developed ahead of the planned construction activities and refined as appropriate during construction works.

g. Please confirm that any construction-related groundwater monitoring and testing along the excavation route will be carried out utilizing properly installed monitoring wells (i.e. in accordance with R.R.O. 1990, Reg. 903: Wells) and appropriate monitoring equipment in order to provide for reliable information and data collection. Maps depicting local pre-construction groundwater flow and potential changes anticipated during dewatering works would be an important part of evaluation. Groundwater monitoring, testing, and data analysis and interpretations should be carried out under the oversight of a qualified hydrogeologist, and data should be recorded on an on-going basis and summarized in an extraction-related hydrogeological summary reports (i.e. for reference and review as required). Such reports and records would provide for an important long-term record with respect to this project in Halton Region.

89.4 Imperial Response

a. As part of the Project construction EPP, a Water Management Plan has been developed to provide best practices during construction activities to reduce the risk of potential effects to surface water and groundwater and to protect groundwater and surface water resources. It is anticipated that, due to the climatic conditions and underlying ground conditions, the Project will encounter both groundwater and surface runoff water from precipitation, requiring dewatering during construction. The Water Management Plan delineates avoidance, dewatering and discharge best practices that can be used to meet the plan's purpose.

b. The Water Management Plan will address groundwater protection, management and mitigation measures during Project construction. The Water Management Plan provides actions to assess, protect and manage groundwater quality and quantity along the pipeline construction route. It also includes a system for notification to the MECP if a complaint is received with respect to the taking of water and the complaint relates to the effects on the natural environment. Imperial is developing a Communication Plan that will be implemented prior to construction which will include contact information for enquiries and receipt of complaints.

c. The Project construction EPP will be inclusive of ongoing commitments with applicable regulatory agencies. The EPP can be filed with the OEB and other agencies upon request a minimum of 30 days prior to construction.

d. The Project construction EPP will include a Contaminated Material Management and Handling Plan.

e. In addition to the description of groundwater resources along the Project route presented in the Environmental Report, a Hydrogeology and Hydrology Study was developed to support the Category 3 Permit to Take Water application for construction dewatering. The Hydrogeology and Hydrology Study was prepared by a qualified geoscientist/engineer. Imperial has retained a consultant to carry out investigations of the subsurface conditions along the planned pipeline construction route in Halton Region.

f. Imperial is currently developing a construction EPP and associated management plans. These documents may be updated throughout construction to reflect permit conditions and commitments.

g. The Water Management Plan will include details on monitoring activities during construction and will Imperial will consider Halton's recommendations. For groundwater, monitoring will include sampling and water level measurements of domestic groundwater supply wells pre- and post-construction, as approved or requested by the owner. During construction, monitoring will include visual inspection of dewatering and discharge operations, daily visual inspection of the receiving environment and daily measurement of discharge volumes.

90. HALTON-4.19

90.1 Topic

Environmental Report – Project Interactions with Halton Biosolids Processing Plant Upgrade

90.2 Reference

Application - Environmental Report, Section 6.3: Project Interactions with Current and Foreseeable Projects, Page 6-4

The Report states:

> *The Region of Halton is planning to upgrade the Halton Biosolids Processing Plant near Regional Road 25 and the upgrades may interact with the proposed construction timing. The Project will be installed by boring under Regional Road 25 and the access road to the Plant, which will avoid any traffic disruptions. No other potential cumulative effects related to the Plant upgrades are anticipated.*

Heavy vehicular traffic utilises the existing entrance to the Biosolids Plant.

90.3 Information Request

a. Does Imperial intend to use this entrance as an access point to the proposed bore locations?

90.4 Imperial Response

a. Imperial does intend to use this entrance as an access point. Imperial plans to utilize the existing pipeline right of way for moving construction equipment as much as possible. The pipeline is proposed to be installed using the trenchless technique of boring to reduce or avoid traffic disruptions at the access road (Johnson Way) to the plant. This will be a short term activity that will be communicated to the Region in advance of construction.

91. HALTON-4.20

91.1 Topic

Environmental Report – Environmentally Appropriate Area Compensation

91.2 Reference

Application - Environmental Report, Section 7: Environmental Protection, Management and Contingency Plans, Reclamation Plan, Page 7-1, 7-2

The Report states:

> *Environmental Protection Plan*
>
> *The purpose of the EPP is to outline the management of the environmental programs during construction in a systematic and documented manner. It includes the applicable requirements and compliance procedures, organizational structure, specific roles and responsibilities, procedures for training personnel, inspection and reporting, and other processes and procedures to maintain environmental compliance. The EPP provides the standards and processes to manage and monitor potential environmental effects. The EPP guides environmental management during construction of the Project and is progressively developed as the Project moves through the OEB approval process, permitting and construction phases.*
>
> *The first stage of the EPP begins with preparation of Environmental Management Plans (EMPs) as part of the EA/permitting process that are commitment-based and broad in their level of detail. As the Project's planning progresses, so does the level of detail of the EMPs, to include permit approval terms and conditions, and other applicable regulatory requirements. The EPP and EMPs form the basis for what will be implemented during construction.*
>
> …
>
> *Reclamation Plan*
>
> *The Reclamation Plan will address the planning, management, and monitoring activities related to the restoration and rehabilitation of the Project's ROW during and after construction. The goal of the Reclamation Plan is to return affected areas to their pre-construction function where feasible, and within 1-3 years following construction. This may include:*
>
> - *Landscaping farmland and private properties in residential areas with the goal to return the landscape to equivalent pre-construction conditions. Where this cannot be completed, compensation for the landowner will be negotiated.*
> - *Certain planting and building restrictions apply to residential properties containing a permanent ROW; however, in consultation with residents, restoration will be designed to accommodate the easement and owner's use.*
> - *Disturbance to sensitive habitats and ecosystems (e.g., watercourses, riparian areas, wetlands, woodlands), will be avoided where possible using trenchless construction methods. Where an area cannot be avoided, mitigation measures will be implemented to avoid or minimize effects on sensitive ecosystems. Conservation authorities, municipalities, and the MNRF will be consulted for vegetation removal compensation (e.g., native seed mixes, tree planting). Refer to Appendix A for a Watercourse Restoration typical drawing.*

91.3 Information Request

a. Neither the Environmental Protection Plan nor the Reclamation Plan, whichever is more appropriate, provide for environmentally appropriate area compensation. Please address how compensation in the form of vegetation replacement will occur within the Regional Natural Heritage System Buffers, Linkages, and Enhancement area, as applicable, as close as possible to the area of removal and preferably on public lands.

b. Please identify the replacement ratios (which should be commensurate with the replicability of the feature being removed (i.e. features that are more difficult to replace warrant a higher replacement rate) which are at a minimum, a replacement ratio of 2:1 replacement area to area removed should be used. Please confirm that replacement of individual trees will occur in according to relevant municipal and conservation authority standards.

91.4 Imperial Response

a. Regional Natural Heritage System vegetation replacement will be discussed in Imperial's Reclamation Plan.

b. Replacement ratios will be determined based on consultation with the Conservation Authority, municipal tree removal/damage permit conditions and consultation with the MECP regarding Species at Risk.

92. HALTON-4.21

92.1 Topic

Environmental Report – Reclamation Plan – Tree Removal

92.2 Reference

Application - Environmental Report, Section 7: Environmental Protection, Management and Contingency Plans, Reclamation Plan, Page 7-2

See "Reclamation Plan" portion of quoted text in 4.20 above.

92.3 Information Request

a. Please confirm that a Reclamation Plan will be prepared to the satisfaction of Halton. All tree removal associated with the pipeline construction must be authorized in accordance with Halton's Tree By-law (By-law# 121-05). Halton will require that any trees or woodlands removed to accommodate the pipeline easement, staff recommend that the Reclamation Plan be developed to show replanting corresponding with appropriate ratios, to enhance ecological functions of the Regional Natural Heritage System, as close to the area of removal as possible and either prior to or immediately after removal. In instances where landowners have no interest in replanting trees on their property, it is recommended that owners of adjacent lands that contain suitable RNHS Buffer, Linkage, and/or Enhancement areas be approached to determine their willingness to allow for planting in these areas. If they too are uninterested in planting trees on their properties in the areas identified, it may be appropriate to enter a replanting agreement with Conservation Halton.

92.4 Imperial Response

a. All affected Conservation Authorities and municipalities, including Conservation Halton and Halton Region will be consulted for vegetation removal compensation. The Reclamation Plan will include appropriate replacement ratios and accommodate, to the extent possible, enhancement of ecological function and structure of the Regional Natural Heritage System.

93. HALTON-4.22

93.1 Topic

Environmental Report – Reclamation Plan – Restoration

93.2 Reference

Application - Environmental Report, Section 7: Environmental Protection, Management and Contingency Plans, Reclamation Plan, Page 7-2

93.3 Information Request

a. This section of the Environmental Report states that the Reclamation Plan will address the planning, management, and monitoring activities related to the restoration and rehabilitation of the Project's right-of-way during and after construction. The stated goal of the Reclamation Plan is to return affected areas to their pre-construction function where feasible, and within 1-3 years following construction. There is no reference to any contingency plans for disruption to Halton-owned infrastructure. Please confirm that all Halton's infrastructure (water, sanitary, storm) and Regional roads (including shoulders, ditch grading and surface restoration within the Regional right-of-way) will be addressed in the Reclamation Plan.

93.4 Imperial Response

a. There are currently no plans to disrupt built infrastructure within the Halton Region. Imperial is committed to engaging with the region should this change and develop a site-specific Reclamation Plan.

   Imperial is currently developing a Reclamation Plan that will address environmental reclamation activities, such as soil replacement, contouring, ditch grading, surface restoration and revegetationwithin Halton Region.

94. HALTON-4.23

94.1 Topic

Environmental Report – Source Protection Plan – Drinking Water

94.2 Reference

Application - Environmental Report, Appendix B: Consultation Key Comment and Response Table, Page 8

The Source Protection Plan for the Halton and Hamilton Regions contains Policy No. L-2-S, which states:

To reduce the risks to drinking water sources from the construction of pipelines conveying oil across open water bodies:

a. the National Energy Board and the Ontario Energy Board in their consideration of any oil pipeline application where this activity would be a significant drinking water threat are requested to ensure that the applicant has complied with or included appropriate design standards, monitoring, and maintenance practices that when implemented will prevent a pipeline from becoming a significant drinking water threat.

b. the Source Protection Department of the Halton Region and Hamilton Conservation Authorities shall consult with the National Energy Board and the Ontario Energy Board to determine if pipeline design standards and the requirements for monitoring and maintenance practices in vulnerable areas consider drinking water source protection, such as the use of isolation valves at either side of creek crossings.

The Consultation Key Comment and Response Table shows a request from the Ministry of Environment, Conservation and Parks to consider source protection areas that the Project is crossing. Imperial's response states:

> *Responded to comment during meeting with MECP that these will be considered with ongoing project planning and design and outlined within the permit application. Refer to section 5.2.4 of the Environmental Report.*

Review of Section 5.2.4 of the Environmental Report does not indicate how Source Protection Areas and related policies will be addressed by Imperial, but it does indicate that "[t]he potential effects of accidental hydrocarbon spills are assessed in Section 7.3" and "[p]otential effects during operation of the pipeline are changes in surface water quality, related to the risk of a hydrocarbon spill, and are discussed in Section 5.4.9." However, the Environmental Report does not appear to contain a Section 5.4.9 or a Section 7.3.

The Environmental Report does not identify the applicable Source Protection Plan policies nor does it indicate how those policies have been addressed to ensure that the proposed pipeline does not become a significant threat to Halton's drinking water sources.

94.3 Information Request

a. Please describe how Imperial's proposal complies with appropriate design standards, monitoring, and maintenance practices (ex. use of isolation valves at either side of creek crossings) as required by Policy No. L-2-S of the Source Protection Plan for the Halton and Hamilton Regions, to prevent the proposed pipeline from becoming a significant threat to Halton's drinking water sources.

94.4 Imperial Response

a. Infrastructure associated with the new pipeline will include valves, as well as launchers and receivers necessary to run pipeline inspection tools. Valve design and placement will be in compliance with TSSA requirements and CSA Z662. The locations of the proposed mainline valves (MLVs) are shown in Table 94-1 below.

Imperial's integrity management program is focused on regular monitoring and inspection of the SPPL with an aim to understand and manage the risks associated with pipeline operations consistent with CSA Z662 expectations. Proactive safety and monitoring measures that are implemented on the existing line and will be implemented on the proposed pipeline include:

- A computerized metering-based leak detection system
- Remote 24/7 monitoring by human controllers with satellite control
- Weekly aerial patrols; portions that cannot be flown are ground patrolled
- Daily ground patrols
- Use of advanced in-line inspection tools which are sent from one end of the line to the other and assess the integrity of the line using the latest inspection technologies (e.g. ultrasound, x-ray, magnetic flux)
- Non-Destructive Testing (NDT) techniques for inspection of weld quality
- Robust Hydrocarbon Control Practices (HCP) including reconciliation of volume along multiple points of the pipeline
- Automated shut-down devices that prevent over-pressurization

Table 94-1: Proposed Mainline Valve Locations

Name	Approximate KP
Waterdown Launcher	0.0
MLV 216	11.0
MLV 217	17.2
MLV 205	32.3
MLV 218	34.4
MLV 219	40.6
MLV TBD [2]	~46.6
Finch Receiver	61.9

[1] Location of the Eglington valve station is currently being negotiated with landowners. Exact location to be confirmed. The valve station will be located at approximately KP 46.6.

95. HALTON-4.24

95.1 Topic

Environmental Report – Intake Protection Zone and Event Based Area Locations

95.2 Reference

Application - Environmental Report, Appendix D: Environmental Features Map, Page 1-7

The Environmental Features Map presents "Intake Protection Zone and Event Based Area" locations within the Credit Valley and Toronto and Region Source Protection Areas (pages 4 -7). The Environmental Features Map does not show the "Intake Protection Zone and Event Based Area" locations within the Halton Region Source Protection Area. These locations are included in the province's Source Protection Information Atlas and on Figure 8 of the Source Protection Plan for Halton and Hamilton Regions, and should be considered in the implementation of the applicable policies in the Source Protection Plan for the Halton and Hamilton Regions to ensure that the proposed pipeline does not become a significant threat to Halton's drinking water sources.

95.3 Information Request

a. Please add the "Intake Protection Zone and Event Based Area" locations within the Halton Region Source Protection Area to the Environmental Features Map.

95.4 Imperial Response

a. The "Intake Protection Zone and Event Based Area" locations within the Halton Region Source Protection Area have been added to the Environmental Features Map in Appendix 19.

96. HALTON-4.25

96.1 Topic

Environmental Report – Identify the Regional Natural Heritage System

96.2 Reference

Application - Environmental Report, Appendix D: Environmental Features Map, Page 1-4

96.3 Information Request

a. Please confirm that Imperial will accurately identify components of the Regional Natural Heritage System (RNHS) on the Environmental Features Maps. Section 115.3 and Map 1G of the Halton Region Official Plan describe and map the components of the RNHS land use designation. The components of the RNHS as shown on Map 1G should be identified on the Environmental Features Maps which apply to Halton.

96.4 Imperial Response

a. All components listed in Section 115.3 of the Halton Region Official Plan are evaluated in the Environmental Report and are mapped in the Environmental Features Map (Appendix D) or Figure 4.4-1 of that report. Imperial has prepared a map of significant woodlands, including those within Halton Region for response to Halton Information Request 4.3. For these sensitive resources such as significant habitat of endangered and threatened species, for example, Imperial is working directly with the Ministry of Environment, Conservation and Parks to determine suitable mitigation measures for implementation in these areas. For watercourses and wetlands, Imperial has submitted applications to Conservation Authorities under Ontario Regulations 161/06, 162/06, 160/06, and 166/06.

97. BELL-1

97.1 Topic

Mapping Information

97.2 Information Request

In order to forecast the potential impact of the above referenced project on Bell Mobility's wireless network assets, Bell Mobility requests detailed MapInfo (TAB format) layers of the proposed installation route from Imperial Oil.

We would like to overlay this information into our existing network maps in order to highlight which Bell Mobility assets may need to be temporarily/permanently relocated to accommodate the pipeline's construction.

As the requested files are likely quite large in size, a USB flash drive or access rights to a virtual storage space are both acceptable to Bell Mobility as data communication methods.

97.3 Imperial Response

Confirmation was received from Bell Mobility on July 9, 2019 that an electronic GIS shapefile could be provided in place of detailed MapInfo (TAB format). A digital shapefile and Google Earth file (kmz) was emailed to all intervenors and the Board Secretary and uploaded to the OEB's RESS filing system on July 31, 2019. The shapefile included the following data layers:

- Proposed route
- Proposed temporary workspace
- Proposed temporary access roads
- Bore and HDD construction locations

98. REFERENCES

American Petroleum Institute (API) RP 1130 Computational Pipeline Monitoring for Liquids, 1st ed. 2007, reaffirmed November 2017

American Petroleum Institute (API) RP 1161 Recommended Practice for Pipeline Operator Qualification (OQ), 3rd Edition, January 2014

City of Mississauga. 2017. Cultural Landscape Heritage Impact Assessment (HIA) Terms of Reference. Retrieved from https://www7.mississauga.ca/documents/culture/heritage/CulturalLandscapeHIA_TermsOfRef2017.pdf

ERM. 2019. *Waterdown to Finch Project Environmental Report*. Prepared by ERM for Imperial Oil Limited.

Past Recovery. 2019. *Stage 1 Archaeological Assessment for the Proposed Waterdown to Finch Project various lots and concessions Geographic Townships of East Flamborough, Nelson, Trafalgar, Toronto, Toronto Gore, Etobicoke & York now City of Hamilton, City of Burlington, Town of Milton, Town of Oakville, City of Mississauga & City of Toronto, Ontario*. Prepared by Past Recovery Archaeological Services Inc. for ERM.