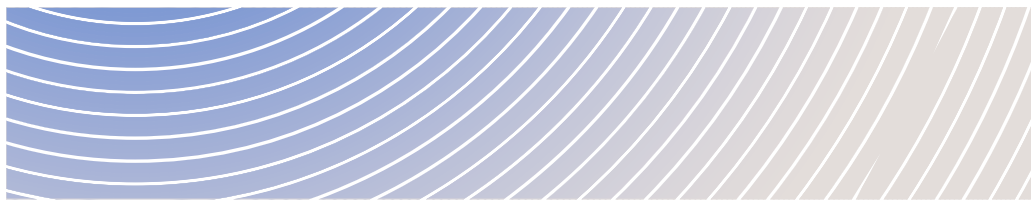


Impact Assessment Agency of Canada



DRAFT ANALYSIS OF CANADIAN NATIONAL RAILWAY COMPANY'S
PROPOSED CHANGES TO THE MILTON LOGISTICS HUB PROJECT (PIPELINE
RECONFIGURATION)

JUNE 2022

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Introduction

The Milton Logistics Hub Project (the Project), as proposed by Canadian National Railway Company (the proponent), includes the construction and operation of an intermodal logistic terminal designed to transfer containers between trucks and railcars. The Project includes a railway yard with over 20 kilometres of track and is located in Milton, Ontario, approximately 50 kilometres west of Toronto. Two oil pipelines owned and operated by Sun-Canadian Pipeline Limited currently run in a southwest-northeast direction in a single right-of-way across the proponent's property, in the northwest portion of the proposed terminal area. The pipelines must be reconfigured to ensure their integrity during the Project.

The Project was subject to an environmental assessment under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). The environmental assessment was conducted by an independent joint review panel. The Joint Review Panel issued its [Report](#) on January 27, 2020. The former Minister of the Environment and Climate Change (the Minister) issued a [Decision Statement](#) for the Project on January 21, 2021. The Decision Statement contains legally-binding conditions, including mitigation measures and follow-up requirements, that the proponent must comply with throughout the life of the Project.

On August 28, 2019, the *Impact Assessment Act* (IAA) came into force, repealing CEAA 2012. Section 184 of IAA provides that decision statements issued under CEAA 2012 are deemed to be decision statements under IAA, and therefore subject to the provisions of IAA. On the same date, the Canadian Environmental Assessment Agency became the Impact Assessment Agency of Canada (the Agency). In this report, the term "Agency" can refer to either the former Canadian Environmental Assessment Agency or the current Impact Assessment Agency of Canada.

Since the issuance of the Decision Statement, the proponent has informed the Agency of proposed changes to the Project. The Agency conducted an analysis of the proposed Project changes and the potential adverse environmental effects of those changes, including additional impacts on the exercise of rights of Indigenous groups, to assess:

- whether the changes constitute a new or different designated project that may require a new impact assessment; and
- whether any changes (including addition or removal) may be required to the mitigation measures and follow-up requirements included as conditions in the Decision Statement to address the proposed Project changes.

The Agency's draft analysis is summarized in this report.

1. Proposed Project Changes

During the environmental assessment, Canadian National Railway Company (CN or the proponent) was planning to realign the two oil pipelines around the proposed terminal area (Figure 1 of CN's April 2022 document entitled *CN Milton Logistic Hub – Proposed Project Change to the Sun-Canadian Pipeline Design and Construction*). The diversion route would have largely paralleled the proposed terminal access road on the southwest side of the terminal, within the Designated Project Development Area, but the diversion route on the northeast side of the terminal would have fallen outside the Designated Project Development Area. The realigned pipelines would have been installed primarily via large open cut trenching through existing agricultural fields, with the exception of where the pipelines would have crossed beneath the existing mainline, where directional drilling would have been used.

After the issuance of the Decision Statement, the proponent optimised the location of the reconfigured pipelines and the methods used to reconfigure the pipelines to reduce potential environmental effects identified during the environmental assessment. Under the optimised approach, the proponent would maintain the current pipeline alignment but would deepen the pipeline trench under the proposed terminal area (Figure 2 of CN's April 2022 document). Instead of ranging in depths between three and six metres below ground surface, the reconfigured pipelines would be installed approximately 14 metres below ground surface. Most of the deepening would be done through directional drilling to reduce the amount of ground disturbance and open excavation would now only be required at the directional drilling entry and exit pits, which would be cleared of vegetation and stripped of topsoil but restored when the work is complete. In the optimised approach, only the directional drilling entry and exits pits would be located outside of the Designated Project Development Area (and only partially).

1.1 Agency's Analysis of Changes

The [Physical Activities Regulations](#) under IAA identify the physical activities that constitute designated projects that may require an impact assessment. The Agency is of the view that the optimised approach to pipeline reconfiguration does not constitute a new or different designated project that may require a new impact assessment.

The Agency analyzed the potential adverse environmental effects of the optimised approach to pipeline reconfiguration to determine whether the mitigation measures and follow-up requirements included as conditions in the Decision Statement may require additions or alterations to account for the revised approach, and whether any additional impacts on the exercise of rights may occur on the Indigenous groups identified in the Decision Statement, or on any Indigenous groups not identified in the Decision Statement. The Agency is of the view that no modifications to the mitigation measures and follow-up requirements included as conditions in the Decision Statement are necessary.

1.1.1 Project components outside of the Designated Project Development Area

The Agency notes that the definition of the Designated Project Development Area in the Decision Statement, as provided in condition 1.9, relies on Figure 1-2 of the Joint Review Panel Report. The Joint Review Panel Report describes the Designated Project Development Area (labelled as the “Project Development Area” on Figure 1-2 of its Report) as the immediate area in which Project activities and components may occur and as such represents the area within which direct physical disturbance, temporary or permanent, may occur as a result of the Project. Figure 1-2 does not show the portions of the reconfigured pipelines’ diversion route falling outside of the Designated Project Development Area under both the original and the optimised approaches. The portions of the reconfigured pipelines’ diversion route falling outside of the Designated Project Development Area under both the original and optimised approaches are shown on Figures 1 and 2, respectively, of CN’s April 2022 document.

2. Potential Adverse Environmental Effects from Proposed Project Changes

2.1 Assessment of potential adverse environmental effects

The following is an analysis of whether the optimised approach to pipeline reconfiguration would cause adverse environmental effects and would require modifications, including additions or removals, to the mitigation measures and follow-up requirements included as conditions in the Decision Statement. The Agency is holding a comment period on this draft analysis report to validate its views on the proponent’s revised approach with Indigenous groups, government authorities and the public, and to provide an opportunity for any further comments before providing advice to the Minister of Environment and Climate Change on potential amendment(s) to the Decision Statement.

2.1.1 Proponent’s Assessment

As part of the environmental assessment, the proponent assessed the potential environmental effects of pipeline reconfiguration on biophysical and socio-economic valued components, including human health and archaeological and heritage, caused by air and noise emissions from construction equipment and changes to

groundwater, surface water quality and quantity and the terrestrial landscape.¹ The proponent concluded that the potential environmental effects of pipeline reconfiguration would be mostly temporary (during the construction phase only) and that with the implementation of mitigation measures, any residual environmental effect that may occur would be negligible. Once the pipelines are relocated, no further interactions with the environment or effects would occur.

While the Joint Review Panel concluded in its Report that the Project, as a whole, would be likely to cause significant adverse direct and cumulative environmental effects in relation to certain valued components, it did not raise any particular issue with respect to pipeline reconfiguration. The Joint Review Panel noted that Halton Municipalities had previously expressed concerns during the environmental assessment that many construction activities (including horizontal directional drilling required for pipeline reconfiguration) would be localized in a single area, near clusters of existing residences, and that this concentration of noise-emitting activities had not been adequately considered when predicting the Project's noise effects on human health. However, the Joint Review Panel also noted in its report that Halton Municipalities had expressed, during the Joint Review Panel's hearings, that they were not concerned with noise effects due to construction activities because they could be adequately controlled.

In April 2022, the proponent submitted information to the Agency describing the optimised approach to pipeline reconfiguration. The proponent stated that the optimised approach would reduce potential environmental effects on surface water and groundwater, vegetation, wildlife habitat, soils, and agricultural uses compared to what was assessed during the environmental assessment because it would reduce the amount of ground disturbance required to reconfigure the pipelines (due to deepening the pipelines rather than diverting them around the proposed terminal area and by limiting the use of open cut excavation). A small area to the northeast would be temporarily disturbed during construction laydown and construction of the exit pit, but would be returned to agricultural land use when work is complete.

In addition, the proponent indicated that the pipeline reconfiguration work would occur on previously disturbed agricultural lands (disturbed both during original pipeline construction and through ongoing agricultural use), that it would not intercept any surface water body or watercourse and that it would not affect any woodland, wetland or species at risk habitat. The majority of the reduced area affected under the optimised approach would be within an area that would otherwise be disturbed during construction of the Project.

The proponent concluded that the potential environmental effects of the the optimised approach to pipeline reconfiguration would be temporary and reversible. Upon completion of the reconfiguration, the disturbed surface areas would be restored. No permanent above-ground structures are proposed.

Table 1 summarises the proponent's assessment of the potential environmental effects on specific valued components for the optimised approach compared to the potential environmental effects of the original approach assessed during the environmental assessment. CN's April 2022 document includes a more detailed analysis of baseline conditions and effects assessment for each valued component. The proponent focused the effects assessment on three specific features of the optimised approach: reduction in ground

¹ For reference, the assessment of the potential environmental effects of the original approach to pipeline reconfiguration can be found in section 6.5 of the [environmental impact statement](#) and in the proponent's responses to the Joint Review Panel's information requests numbers [4.1](#), [4.84](#) and [8.13](#).

disturbance, increased depth of the pipelines alignment and use of horizontal drilling along the entire length of the reconfigured pipelines.

Valued Component	Effects Assessment
Air quality	Potential adverse effects on air quality would be reduced under the optimised approach because while the air emission sources would be similar to those assessed during the environmental assessment, they would be of shorter duration as reconfiguration of the pipelines is expected to take less time to complete.
Noise and vibration	Potential adverse effects from noise and vibration would be reduced under the optimised approach because while the sources of noise and vibration would be similar to those assessed during the environmental assessment, they would be of shorter duration as reconfiguration of the pipelines is expected to take less time to complete.
Groundwater	Potential adverse effects on groundwater would be similar under the original and optimised approaches. While the reconfigured pipelines would be installed at a lower depth, groundwater is located below the proposed installation depth and the composition of sediments found at the proposed installation depth limits water movements.
Fish and fish habitat	Potential adverse effects on fish and fish habitat would not be greater under the optimised approach because no fish or fish habitat would be located within the affected area and no watercourse crossing would be required. The types of activities required to reconfigure the pipelines would also be similar to the activities considered in the environmental assessment, but would occur over a smaller areal extent.
Migratory birds	Potential adverse effects on migratory birds would be reduced under the optimised approach because the use of horizontal drilling would reduce the amount of grassland habitat lost as a result of the Project.
Species at risk	Potential adverse effects on species at risk would not be greater under the optimised approach because no species at risk habitat are located within the area that would be affected by pipeline reconfiguration.
Current use of land and resource for traditional purposes	Potential adverse effects on the current use of land and resource for traditional purposes are not anticipated because Indigenous groups do not practice traditional land and resource use activities in the area of the Project.
Socio-economic conditions	Potential adverse effects on socio-economic conditions would be similar under the original and optimised approaches because there would be no additional demand or interaction in relation to land and resource use as a result of pipeline reconfiguration.

Human health	Potential adverse effects on human health in relation to air quality would be reduced under the optimised approach because while the air emission sources would be similar to those assessed during the initial environmental assessment, they would be of shorter duration as reconfiguration of the pipelines is expected to take less time to complete.
Archaeological and Heritage Resources	Potential adverse effects on archeological and heritage resources would be similar under the original and optimised approaches because the area that would be affected under either approach was assessed as part of a supplemental archeological assessment requested by the Joint Review Panel during the environmental assessment and its was determined that no further archaeological assessment work was required in this area.

TABLE 1 Summary of environmental effects assessment for the optimised approach compared to the original approach to pipeline reconfiguration

The proponent is of the view that no change to the mitigation measures and follow-up requirements included as conditions in the Decision Statement would be necessary to address the potential environmental effects of the optimised approach because the Decision Statement already includes several conditions that require the proponent to implement measures to mitigate environmental effects likely to be caused by activities associated with the Project (including activities associated with pipeline reconfiguration), for example:

- measures to mitigate dust and air emissions (conditions 4.11 and 4.13);
- measures to mitigate noise (conditions 4.6 to 4.9);
- measures to control erosion and sedimentation (condition 5.4);
- measures to prevent the preferential movement of groundwater and to manage dewatering (conditions 5.11 and 5.12)
- measures to circumscribe the amount of ground disturbance (condition 6.5)
- measures to minimize and manage soil disturbance (conditions 6.6, 6.7 and 6.9);
- measures to avoid the introduction or spread of invasive vegetation (condition 6.8);
- measures to ensure that vegetation in migratory bird habitat remains undisturbed during the breeding season (conditions 8.2 and 8.11);
- measures to compensate for the loss of grassland habitat (condition 8.12); and
- measures to handle the discovery, recognition, recording, transferring and safekeeping of previously unidentified structures, sites or things of historical, archaeological, paleontological or architectural significance and of human remains (conditions 11.8 to 11.10).

The proponent is also of the view that monitoring associated with the existing follow-up programs required by the Decision Statement would remain sufficient to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures caused by and associated to the optimised approach.

In addition, the proponent committed to implement measures that are standard when conducting horizontal drilling and that were already outlined during the environmental assessment, including measures related to

inground surface settlement monitoring, soil management, the installation of anti-seepage collars and dewatering.

2.1.2 Agency's Analysis and Conclusions

The Agency is of the view that the optimised approach to pipeline reconfiguration would not result in adverse environmental effects beyond those that were identified in the Joint Review Panel Report (including for any portion of the reconfigured pipelines' diversion route that is not within the Designated Project Development Area), primarily because the footprint of open excavation area would be reduced by approximately 84 % from the footprint of open excavation area planned under the original approach (from 26,524 m² to 4.312 m²).

In addition, while the reconfigured pipelines would be installed at a greater depth (13.8 metres below ground surface) than the existing pipeline depth (three to six metres below ground surface), they would not intercept groundwater, which was encountered at a depth of 15.2 metres below ground surface during groundwater sampling conducted in 2021 along the proposed pipeline alignment. Soil composition in the area would also limit any potential water movement. Finally, horizontal drilling is considered a standard and well-used method for installing pipelines where reducing potential environmental effects is required.

Given that the Agency is of the view that the optimised approach to pipeline reconfiguration would not result in adverse environmental effects beyond those that were identified in the Joint Review Panel Report, the Agency is also of the view that pipeline reconfiguration is unlikely to cause adverse environmental effects and impacts to the exercise of rights of Indigenous Peoples beyond those assessed in the Joint Review Panel Report. An analysis of adverse effects of changes to the environment on current use of lands and resources for traditional purposes, health of Indigenous peoples, physical and cultural heritage, and biophysical resources informed the assessment of impacts on the exercise of rights of Indigenous Peoples during the environmental assessment. The Decision Statement includes as conditions related mitigation measures and follow-up requirements.

The Agency notes that there are no new adverse environmental effects or impacts to the exercise of rights by Indigenous Peoples from pipeline reconfiguration that would extend into the local and regional assessment areas identified in the Joint Review Panel Report, and therefore, there would be no impact on the exercise of rights of other Indigenous groups not identified in the Decision Statement.

Therefore, no changes are required to the mitigation measures and follow-up requirements included as conditions in the Decision Statement. The Agency notes however that the Designated Project Development Area, currently defined in condition 1.9 of the Decision Statement to be the area labelled "Project Development Area" on Figure 1-2 of the Joint Review Panel Report, must be amended to encompass the full pipeline reconfiguration to ensure that all relevant conditions apply to pipeline reconfiguration work and that the Agency's ability to enforce the Decision Statement is not impeded.

3. Consultation

3.1 Proponent's Consultation

The proponent consulted the participants identified in conditions 2.16 and 2.17 of the Decision Statement on the optimised approach to pipeline reconfiguration, namely the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, the Huron-Wendat Nation, Halton Region and Conservation Halton. The proponent also consulted the Town of Milton. In its April 2022 document, the proponent stated that the three Indigenous groups indicated their general support for the potential change, both by email and through conference call discussions. Halton Region, Conservation Halton and the Town of Milton raised some issues in relation to the potential environmental effects of the optimised approach (Table 2). The proponent indicated that the April 2022 document responds to these issues.

Participant	Issue(s) raised
Halton Region	Impacts to groundwater resources
Town of Milton	Impacts to the local environment
Conservation Halton	Impacts to water resources (including drainage flows towards watercourses)

TABLE 2 Issues raised by participants during consultation on the optimised approach to pipeline reconfiguration

3.2 Agency’s Consultation

The Agency is holding a comment period to validate its views on the proponent’s optimised approach to pipeline reconfiguration with Indigenous groups, government authorities and the public, and to provide an opportunity for any further comments before providing advice to the Minister on potential amendment(s) to the Decision Statement.

The Agency will consider the comments received during the comment period when finalizing this report and its advice to the Minister. The final report will reflect and address all relevant comments.

4. Conclusion

The Agency is of the view that the optimised approach to pipeline reconfiguration would not result in adverse environmental effects beyond those that were identified in the Joint Review Panel Report (including for any portion of the reconfigured pipelines’ diversion route that is not within the Designated Project Development Area). The Agency is also of the view that the proposed project changes would not cause any additional adverse environmental effects and impacts to the exercise of rights of the Indigenous groups identified in the Decision Statement other than the effects described in the Joint Review Panel Report. Therefore no changes are required to the mitigation measures and follow-up requirements included as conditions in the Decision Statement.

However, the Agency considers that condition 1.9 of the Decision Statement should be amended to encompass the full extent of pipeline reconfiguration, including the directional drilling entry and exit pits (Figure 2 of CN’s April 2022 document) in the definition of the Designated Project Development Area (Table

3). This amendment will ensure that all conditions apply to pipeline reconfiguration work and that the Agency's ability to enforce the Decision Statement is not impeded.

Original version	Proposed amendment
<p>1.9 <i>Designated Project Development Area</i> means the immediate area in which Designated Project activities and components may occur and within which direct physical disturbance, temporary or permanent, may occur because of the Designated Project, defined as the “Project Development Area” in figure 1-2 of the Joint Review Panel Report (Canadian Impact Assessment Registry Reference Number 80100, Document Number 985).</p>	<p>1.9 <i>Designated Project Development Area</i> means the immediate area in which Designated Project activities and components may occur and within which direct physical disturbance, temporary or permanent, may occur because of the Designated Project, defined as the “Project Development Area” in figure 1-2 of the Joint Review Panel Report (Canadian Impact Assessment Registry Reference Number 80100, Document Number 985), <u>and which includes the directional drill entry and exit pits shown on figure 2 of the April 8, 2022 document entitled <i>CN Milton Logistic Hub – Proposed Project Change to the Sun-Canadian Pipeline Design and Construction</i> (Canadian Impact Assessment Registry Reference Number 80100).</u></p>

TABLE 3 Original version of definition 1.9 and proposed amended definition