GUIDELINES FOR PREPARING THE

ENVIRONMENTAL ASSESSMENT FOR THE

LES CÈDRES PROJECT

PROPOSED BY CANADIAN PACIFIC RAILWAY

This document outlines the scope of the environmental assessment (EA) for the Canadian Pacific Railway Company's (CP) intermodal complex project 35 km SW of Montréal in the municipality of Les Cèdres, county of Vaudreuil-Soulanges. It was prepared in accordance with the *Canadian Environmental Assessment Act* (CEAA) which provides that the Responsible Authority involved, in this case the Canadian Transportation Agency (the Agency), is to establish the scope of the project and assessment. The purpose of the document is to guide CP in preparing the EA which the various stakeholders will review and which the Agency and the other federal departments will analyze to determine the project's environmental impacts.

1. Project description

The intermodal complex which CP proposes to build would comprise 313 hectares and have an annual capacity of 550,000 containers. The project has the following components:

$ freight distribution centres
$ long loop tracks to maximize efficient rail operations;
$ office and maintenance buildings;
$ roadways, parking spaces and truck staging areas;
$ container storage areas to consolidate the handling of containers on one integrated site; and
$ utilities such as water supply and waste water treatment as well as a firefighting unit.

2. Assessment of the project

Pursuant to section 98 of the *Canada Transportation Act,* the Agency is a responsible authority for the project's environmental assessment and it will also serve as federal EA coordinator. Transport Canada may become a responsible authority as a result of the licences or authorizations it may have to issue for the project.

Environment Canada and Health Canada, which are not responsible authorities for the assessment of this project, will act as expert departments.

As the project is not on the CEAA Comprehensive Study List, a preliminary screening of the project will be conducted.

Authorization will be required from the Province of Quebec's Commission de protection du territoire agricole (farmland protection board). Other permits or authorizations may be required from the Government of Quebec or from municipal or regional governments.

The environmental assessment must list the federal, provincial and municipal laws, regulations and guidelines to which the project is subject.

3. Scope of the project

The scope of the project includes all construction, operation, maintenance, modification and decommissioning activities for the following components:

- Trackage: land clearing and removal of existing rail and of one building in order to build the lead tracks/wye, intermodal pad tracks, runthrough tracks, pullback track, storage tracks, loop tracks, empty container tracks, rail car repair tracks, locomotive staging/storing track, and modifications to the infra structure of the adjacent portion of CP's Winchester Subdivision;
- Rail Infrastructure: one underpass so that the CN and CP lines can cross, and two underpasses for roads;
- Buildings: the administration and maintenance buildings as well as the distribution centres, sheds and other buildings;
- Roadways: access roads, engineering works, interior roadways, parking spaces and storage areas;
- Utilities and related infrastructure: self-contained drinking water supply including a fire protection system, an independent wastewater treatment and discharge system with aerated lagoons, a storm water management system with catch basins, one fuel tank, landscaping, and electric power;
- Any other work, temporary or permanent structure or activity directly related to the main works and their maintenance.

Operational activities include but are not limited to the handling of container trains from western and eastern Canada, the transfer of freight from the rail terminal to the distribution centres and from there onto trucks, and the storage, assembly and refuelling train.

The environmental assessment should include a description of each of these components and of the associated works and activities, including any not identified above. It should describe all roadways, facilities or other elements of the built environment that may be dismantled or decommissioned during the project. It should also analyze the potential increase in traffic on the Winchester Subdivision if the project proceeds.

The EA should include a scale drawing of residences, schools, daycares or other sensitive receptors in the study area that might sustain environmental effects during construction or operation. It should also describe the separation distances and berms which are being planned to reduce the impacts of the project on residences, farms and other facilities nearby and indicate the distances between the various components of the project and the nearest of these facilities.

The EA should also state the future role of CP's facilities in Lachine if the project in Les Cèdres proceeds.

4. Factors to be considered

Pursuant to paragraphs 16(1)(*a*) to (*e*) of the CEAA, the environmental assessment should cover the following:

(*a*) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out
(*b*) the significance of the effects referred to in paragraph (*a*);
© comments from the public that are received in accordance with this Act and the regulations;
(*d*) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
(*e*) any other matter relevant to the screening

The CEAA defines environmental effects as "*a*) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*, *b*) any effect of any change referred to in paragraph *a*) on (I) health and socio-economic conditions, (ii) physical and cultural heritage, (iii) the current use of lands and resources for traditional purposes by aboriginal persons, or (iv) any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or *c*) any change to the project that may be caused by the environment".

The environmental assessment should delimit the study area, including the spatial and temporal boundaries of the construction and operation phases of the project. These boundaries should reflect the geographic range and temporal extent over which the project's environment effects may occur.

The significance of environmental effects is determined on the basis of the following criteria: the magnitude, geographic extent, duration, frequency, reversibility and ecological context of residual environmental effects once mitigation measures are in place. See the Canadian Environmental Assessment Agency's document entitled "Reference Guide: *Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects*."

The factors to be considered include but are not limited to the following environmental components throughout the construction and operational phases of the project:

Rationale of Project
The draft should describe the rationale for the project.

Alternatives To and Alternative Means
The "alternatives to" the project are the functionally different ways to meet the project need and achieve the project purpose, while "alternative means" are the various technically and economically feasible ways the project can be implemented or carried out.

This would include alternative locations in the Greater Montréal Area, including existing industrial sites; the reasons for the selection of Les Cèdres; and the status quo. The environmental assessment should analyze alternatives to the project and alternative means of carrying out the project as per the policy of the Canadian Environmental Assessment Agency on the “need for”, “purpose of”, “alternatives to” and “alternative means”.

Noise and Vibration
An analysis should be made of noise and vibration from project-related sources, including trains, trucks and handling equipment, during the construction and operation phases of the project. Special attention should be paid to residences most likely to be affected by noise or vibration. Baseline levels should be established with a view to analyzing the contribution of the project to noise and vibration in the study area. *See the attached recommendations of Health Canada on assessing the effects of project-related noise on human health.*

Air Quality
The environmental assessment should describe the air quality in the study area and indicate the potential negative of the project on air quality. The assessment should include an analysis and quantitative data to support its conclusions. *See the attached recommendations of Health Canada on assessing the effects of air quality on human health.*

Accidents and Malfunctions
The assessment should identify any accidents and malfunctions that may occur during construction or operation. These might include spills of oils or hazardous materials, accidents on the roads within the project area, fires or mechanical breakdowns. The assessment should describe what emergency measures would be available and how they would be activated in the event of an accident or malfunction.

Traffic
The assessment should analyze the impact of project-related traffic on the roads in and around the municipality of Les Cèdres, on highways in the Vaudreuil-Soulanges region, and on the bridges connecting the region to the Island of Montréal. Special attention should be paid to the effect of project-generated traffic on rush hour traffic.

The assessment should describe the impact of any temporary congestion or closure of Highway 20 on roads near the project site. It should include studies of traffic at level crossings around the project site, in particular the one at the intersection of chemin Saint-Dominique and mileage 26.33 of the CP line. At this level crossing at, as others, the impact on visibility of the construction of a siding in the Winchester Subdivision should be described. The level crossing at the intersection of chemin Saint-Dominique and the Canadian National Railway Company (CN) track should also be the subject of a traffic study, to evaluate the appropriateness of synchronizing the traffic light that is planned for the intersection of chemin Saint-Dominique and the Highway 20 on-ramp with the CN line.

Water Resources

The assessment should include a description of water bodies in the study area and their ability to support aquatic resources, as well as an analysis of the effects of the project on these resources.

It should further include a description of the project's water requirements and supply methods and of the project's impact on the water resources of the community (including farms).

The assessment should also describe the planned wastewater treatment and discharge methods and the impact these would have on water bodies; the way in which runoff water, including water containing de-icing salts, would be drained and treated; and the way in which any spill or runoff of toxic substances that might adversely affect water bodies and groundwater would be contained and recovered.

Rail Safety and Human Safety
The assessment should analyze rail safety and vehicle safety, and it should describe planned measures to ensure human safety, including measures to control access to the site. Hazardous materials management should also be discussed.

Quality of Life
The assessment should analyze the effect of the project on the quality of life of residents in and around the rural municipality of Les Cèdres. The analysis should take into account the concerns expressed during the public consultations.

Quality of life includes aesthetic matters such as the visual impact of the project on the rural landscape and the potential light pollution.

Waste Management
The assessment should describe planned waste management for both the construction phase (including the possible excavation of contaminated soils) and the operation phase, as well as measures to be taken in case of a spill.

Land Use
The assessment should describe present uses of the land at and near the project site as well as the effects of the project on these uses. The analysis should include the effects of removing lands needed for the project from other uses such as agriculture, and the potential effects of the project on nearby farms.

Local Economy
The assessment should analyze the indirect effects of the project on the local economy. These could be, for example, the potential effects on the real estate market, municipal revenues and expenditures, the job situation, or the supply of and demand for services (including subcontracting).

Biological Resources
The assessment should describe the valued ecosystem components in the study area, how they were chosen, and how they could be affected by the construction and operation of the project. *See the attached mitigation measures recommended by Fisheries and Oceans Canada to protect fish and their habitat.*

Archaeological and Cultural Resources
The assessment should assess the potential of encountering archaeological or cultural resources on the site, and state what steps would be taken if such a discovery were to be made during construction.

Cumulative Effects
In order to evaluate cumulative effects, the assessment should identify other projects and activities that have been or will be carried out in the study area. It should:

- summarize the foreseen residual environmental effects of all phases of the project once mitigation measures have been implemented;

- indicate, for each relevant environmental component, whether and how the effects of each of the other projects and activities could overlap on the environmental effects of the project in question. This part of the assessment could be organized by environmental component, and the construction and operation phases could be addressed separately, where required.

Public/Aboriginal Consultation
The assessment should describe steps taken by the proponent to inform and consult with the various interested parties about the project. It should describe the concerns of interested parties expressed during consultations on the project, and how these concerns have been taken into account when designing the project and the proposed mitigation measures. This information should be presented in tabular format.

The proponent should indicate how it intends to inform interested parties about the publication of the environmental assessment report and about how they can comment on it before any decisions are made concerning the environmental effects of the project.

Contribution to Climate Change
The assessment should include an analysis of the potential contribution of the project to climate change, as per the process described in the Canadian Environmental Assessment Agency's document *Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners.*

For all the potential effects which are analysed, the assessment should describe the methods used, identify the modelling software, and state which standards or guidelines were taken into consideration.

5. Mitigative Measures

The assessment should identify measures that are technically and economically feasible and would mitigate any significant adverse environmental effects of the project. Each mitigation measure should be accompanied by an estimation of its capacity to reduce the magnitude, geographic extent, duration and frequency, and reversibility of the environmental effect it is being applied against.

6. Monitoring and Follow-up

The assessment will include, if deemed necessary, an outline of an environmental monitoring plan to be developed for the construction and operation of the project. The plan will include details for any monitoring program that may be required by provincial or federal agencies involved in assessing the project or in granting permits or approvals to ensure that the commitments of proponents are met during the construction and operation phases of the project.

Additionally, the assessment should consider whether a follow-up program to determine the accuracy of the environmental analysis and the effectiveness of the mitigation measures is warranted.

7. Suggested outline for the environmental assessment report

The proponent is required to prepare an EA report to help federal responsible authorities, including the Agency, make decisions on the project pursuant to the CEAA. The report will also inform citizens and municipal, regional and provincial officials about the environmental effects of the project. The analyses and conclusions on potential environmental effects should be well documented. The report should include the following items:

- Summary
- Project Description
- Description of the Existing Environment
- Public/Aboriginal Consultation
- Environmental Effects of the Project
- Proposed Mitigation Measures
- Determination of Significance of Environmental Effects
- Synthesis of Residual Effects; Analysis of Cumulative Impacts
- Monitoring and Follow-up
- Conclusion
- Expert Department Consultation
- Annexes and Illustrations

8. Time frames

The environmental assessment should be submitted to the Canadian Transportation Agency well in advance of any application for approval pursuant to the *Canada Transportation Act*.

9. Contact:

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ANNEX

Health Canada
Guidelines for Assessing the Effects of Road and Rail Projects on Health – Noise Impacts
Les Cèdres Project[1], October 2008

In order to properly assess the effects of the project on human receptors, Health Canada requires the following information:

- A clear map of the appropriate scale of all permanent and seasonal residences in the study area, as well as any schools, daycares, seniors' homes or other sensitive receptors that might sustain environmental effects during construction or operation.

Assessment of noise impacts

Construction phase:

Provide the following:

1. A list of all sources that will significantly contribute to construction noise;
2. A description of every significant type of construction noise: continuous noise (e.g. transformer); intermittent noise (e.g. backup alarm; train); regular impulsive noise; highly impulsive noise (e.g. hammering on metal, metallic impacts during train movements); high energy impulsive noise (e.g. explosives). Other examples are given in the standard CAN/CSA-ISO1996-1:05[2], part 3.5;
3. A noise estimate based on levels observed at similar construction sites and/or on levels from sources at the study site;
4. A description of the methods used to obtain the expected level of construction noise, including the name of the commercial software used; if noise levels from sources are used, state the values and how they were obtained;
5. The extent and schedule of construction activities, including the duration of these activities (include night work and pile driving);
6. Representative values of baseline noise, construction noise and a combination of baseline and construction noise on the most exposed side of sensitive receptors, or if preferred in the form of isophonic curves, including:

    - The average noise level over the course of the day, from 7 a.m. to 11 p.m.;
    - The average noise level over the course of the night, from 11 p.m. to 7 a.m.;
    - The observed average noise levels over a period of 24 hours (Leq);
    - The observed value of Leq between 10 p.m. and 11 p.m. (in cases where the Province deems the day to end at 10 p.m.).

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[1] These guidelines have been developed specifically for the Les Cèdres Intermodal Complex project and may not be used for any other project.

[2] CAN/CSA-ISO1996-1:05 (2005) (ISO 1996-1:2003). Description, measurement and assessment of environmental noise – Part 1: Basic quantities and assessment procedures

7. The noise mitigation measures for the construction phase and the residual noise levels once these are in place. Special attention must be given to the question of whether there is a need for backup alarms that are sensitive to the ambient noise, or alarms that can be adjusted by the vehicle operator;
8. Description of the type of residence affected, along with an assessment of noise reduction outdoors and indoors;
9. A noise monitoring plan.

Operation phase:

The operation phase concerns the maximum capacity of the road or the railway, i.e.the maximum traffic flow foreseen (e.g. car, truck and train traffic) for the proposed development. The noise levels in question include the noise from road traffic, rail traffic and activities in the shunting yard.

Provide the following:

1. Representative values of the baseline noise, the operational noise and a combination of the baseline and operational noise on the most exposed side of sensitive receptors, or if preferred in the form of isophonic curves, including:
   - The average noise level over the course of the day, from 7 a.m. to 11 p.m.;
   - The average noise level over the course of the night, from 11 p.m. to 7 a.m.;
   - The average noise levels over a period of 24 hours (Leq);
   - The value of Leq between 10 p.m. and 11 p.m. (in cases where the Province deems the day to end at 10 p.m.).

In the case of rail projects, provide the Leq 24 (dBA), the noise level during the night Ln (dBA), and if possible the day-night composite noise level Ldn (dBA) for the following:

- Shunting operations. The standard CAN/CSA-ISO 1996-1:05 sees shunting as generating high energy impulse noise and it recommends an adjustment of 12 dB at the source. Indicate the type of shunting (“roll” or “push”) and the number of events generating impulse noise during the night;
- Operations that generate non-impulse noise such as whistling. The standard CAN/CSA-ISO 1996-1:05 recommends an adjustment of 5 dB at the source for such tonal noise.

2. A description of the methods used to obtain the expected level of operational noise, including the name of the commercial software used;
3. The noise mitigation measures for the operation phase and the residual noise levels once these are in place;

4. A noise monitoring plan.

Cumulative impacts

Any other significant source of noise situated near the site (existing or planned projects) should be considered and the cumulative noise impact for human receptors around the site should be assessed.

Health Canada
Guidelines for Assessing the Effects of Road and Rail Projects on Health – Air Quality
Les Cèdres Project[3], October 2008

Assessment of air quality impacts

Construction phase:

Provide the following:

1. The baseline air quality, identifying the sites used;
2. Inventory of all emission sources (e.g. $PM_{2.5}$, NO_2, SO_2, Volatile Organic Compounds, diesel particles from construction equipment, road and rail traffic);
3. Representative values for baseline air quality and a combination of baseline and construction phase values on the most exposed side of sensitive receptors, or if preferred in the form of isoconcentration curves;
4. Possible mitigation measures for the construction phase such as spraying at locations where concrete is being drilled, sawn or crushed so as to bring the dust down to the ground, reduction in the speed of on-site vehicles, and spraying and sweeping of roads to reduce dust emissions. These measures should be identified in the environmental management plan.
5. The air quality monitoring program if applicable.

Operation phase:

The operation phase concerns the maximum capacity of the road or the railway, i.e.the maximum traffic flow foreseen (e.g. car, truck and train traffic) for the proposed development. Include projected atmospheric emissions from road traffic, rail traffic and activities in the shunting yard if applicable.

Provide the following:

1. Representative values for baseline air quality, operation phase emissions, and a combination of baseline and operation phase values on the most exposed side of sensitive receptors, or if preferred in the form of isoconcentration curves.
2. A rationale for whether a more detailed evaluation is required. A more detailed evaluation would be desirable if, for example, air quality criteria or standards are exceeded at receptor sites;
3. Proposed mitigation measures for the operation phase. These measures should be identified in the environmental management plan.
4. The air quality monitoring program if applicable.

Cumulative impacts

Any other significant source of atmospheric emissions situated near the site (existing or planned projects) should be considered and the cumulative air quality impact for human receptors around the site should be assessed.

[3] These guidelines have been developed specifically for the Les Cèdres Intermodal Complex project and may not be used for any other project.

1. Control of erosion and resuspension of sediment

1.1 Maintain in good condition all works that are protecting the environment.

1.2 Take all necessary precautions to prevent transport of fine particulates into the aquatic environment beyond the immediate area of construction work.

1.3 Stabilize all locations that have undergone change, in particular slopes of embankments, and do so as the work progresses. If a delay is necessary for permanent stabilization, erosion control measures must remain in place to prevent erosion and capture any eroded matter.

1.4 Dispose of excavated materials at a site designated for this purpose.

1.5 Do not dump any debris, concrete residues or wet mortar into the aquatic environment. Any debris accidentally entering the aquatic environment must be removed as quickly as possible.

1.6 Do no grading or excavation work near water courses during high water periods or heavy rains.

1.7 If possible, use confinement structures to prevent transport of sediment into the water.

1.8 Install filtering berms, sedimentation basins or sediment traps in sufficient quantity in work areas to prevent transport of sediment into the water. However, such structures must not be built outside the work area in fish habitats. Structures must be functional at all times.

1.9 Install ditches to capture runoff water along temporary roads in order to prevent erosion and transport of fine sediment.

1.10 Take all necessary measures to prevent soil erosion when temporarily shutting down a construction site.

1.11 Limit tree felling, soil stripping, excavation and grading of work areas to what is strictly necessary.

2. Machinery

2.1 Carry out general maintenance and refuelling, as well as handling and storage of oil, at a distance of more than 30 m from the ordinary high water mark, and make sure that the risk of contaminating aquatic fauna remains negligible.

2.2 Outside the right of way, avoid letting machinery move within 20 m of the ordinary high water mark.

2.3 Prohibit fording of water courses by machinery.

2.4 Restrict vehicles to proposed and clearly identified routes.

2.5 Take machinery away from water courses when it is no longer in use.

2.6 Use clean machinery that is in good operating condition in order to avoid leaks of grease or fuel.

2.7 Take used oil from machinery, as well as waste, to a site designated for that purpose.

2.8 Have on site, and know how to use, equipment for dealing with an accidental spill. In the event of a spill of oil or some other harmful substance, immediately alert Environment Canada (1 866 283-2333) or the Province of Quebec's ministère du Développement durable, de l'Environnement et des Parcs (MDDEP) (1 866 694-5454).

3. Site restoration

3.1 Restore ditches damaged by machinery (damage to gradient, shoulders of embankments, etc.).

3.2 Restore banks using recognized techniques of stabilization through planting, taking into account stability, propensity to erosion, slope and height of embankment. Replanting must be done as soon as possible after grading work is complete, with preference given to indigenous species.

3.3 Limit riprap on banks of water courses to the ordinary high water mark and replant starting at the edge of the riprap, which shall be composed of clean stones free of fine materials.

3.4 Restore banks and bed of water courses to original state (particle sizes, bed profile, etc.) after temporary structures have been dismantled.