



Environmental Health Program (EHP)
Regulatory Operations and Enforcement Branch, Health Canada
9700 Jasper Avenue, 9th floor
Edmonton, AB
T5J 4G3

December 08, 2020

Shelly Boss
Project Manager
Impact Assessment Agency of Canada
Prairie and Northern Region
9700 Jasper Ave, 11th Floor
Edmonton, AB
T5J 4C3

Subject: Health Canada's Response to the Determination of Impact Assessment Requirement for the Heartland Complex Expansion Project

Dear Shelly Boss,

Thank you for your letter dated November 19, 2020 requesting Health Canada's comments on the initial Project Description provided by Value Chain Solutions Inc. for the Heartland Complex Expansion Project.

Health Canada participates in the impact assessment process as a federal authority under the *Impact Assessment Act* (IAA). Health Canada makes available specialist or expert information or knowledge in its possession, at the request of the Impact Assessment Agency of Canada (the Agency).

The objective and scope of Health Canada's review of the initial Project Description is to verify that the potential health impacts of projects are properly identified for the purpose of determining whether a federal impact assessment is required. Health Canada has reviewed the initial Project Description and provided input, where appropriate, in the attached Federal Authority Advice Record. Should the Agency determine that an impact assessment is required for the Project, Health Canada can provide expertise on issues that are addressed within its departmental mandate and federal jurisdiction.



Health
Canada

Santé
Canada

Should you have any questions concerning Health Canada's response, please contact Michael Rybansky (michael.rybansky@canada.ca).

Sincerely,

<original signed by>

Brenda Woo
Regional Manager, EHP Alberta Region
Regulatory Operations and Enforcement Branch
Health Canada
Phone #: 780-288-3541

- cc: Kathleen Buset, Manager, Healthy Environments and Consumer Safety Branch, Health Canada
- cc: Matthew Goncalves, Environmental Assessment Coordination Specialist, Healthy Environments Consumer Safety Branch, Health Canada
- cc: Michael Rybansky, Environmental Assessment Specialist, EHP Alberta Region, Health Canada
- cc: Graham Irvine, Environmental Assessment Specialist, EHP Alberta Region, Health Canada

Attachment:
Federal Authority Advice Record

December 8, 2020

ATTACHMENT: Federal Authority Advice Record

Response due by December 9, 2020

Value Chain Solutions - Heartland Complex Expansion Project

Agency File: 81148

Department/Agency	Health Canada
Lead IA Contact	Brenda Woo
Full Address	9700 Jasper Ave, 9th floor Edmonton, Alberta T5J 4G3
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Telephone	780-288-3541
Alternate Departmental Contact	Michael Rybansky (michael.rybansky@canada.ca)

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1. Is it probable that your department or agency may be required to exercise a power or perform a duty or function related to the Project to enable it to proceed?

Not Applicable.

If yes, specify the Act of Parliament and that power, duty or function.

2. Is your department or agency in possession of specialist or expert information or knowledge that may be relevant to the conduct of an impact assessment of the Project?

Specify as appropriate.

As a federal authority, Health Canada will provide specialist or expert information or knowledge in the Department's possession (expertise) to support the assessment of impacts on human health from projects considered individually and cumulatively under the *Impact Assessment Act* (IAA). The Department provides expertise in the areas described below; it does not play a regulatory role. How the expertise provided by Health Canada will be used in the impact assessment process will ultimately be determined by the reviewing body(ies). It should also be noted that expertise related to assessing human health that is relevant to Impact Assessments may be held by other federal, provincial, and municipal partners, reflecting the shared jurisdiction for environmental and human health within Canada. For example, the Public Health Agency of Canada has expertise in the social determinants of health, and may provide that expertise through Health Canada, upon request from the reviewing body.

There are many determinants of health, from the economic environment to a person's individual characteristics¹.

To support the implementation of the IAA, Health Canada can provide expertise in the following areas:

- Air quality

¹ Government of Canada (<https://www.canada.ca/en/public-health/services/health-promotion/population-health/what-determines-health.html>)

- Recreational and drinking water quality
- Traditional foods (country foods)
- Noise
- Methodological expertise in conducting human health risk assessment (HHRA)
- Methodological expertise in conducting health impact assessment (HIA)
- Electromagnetic fields
- Radiological emissions
- Public health emergency management of toxic exposure events

Available Health Canada guidance:

Health Canada has published the following guidance documents for evaluating human health impacts:

Guidance for Evaluating Human Health Impacts in Environmental Assessment:

- Human Health Risk Assessment
- Air Quality
- Water Quality
- Country Foods
- Noise
- Radiological Impacts

<https://www.canada.ca/en/services/health/publications/healthy-living.html#a2.5>

Guidance prepared by Health Canada on management of crude oil incidents titled “*Guidance for the environmental public health management of crude oil incidents: a guide intended for public health and emergency management practitioners*” is available as a PDF and in html format through the following link:

<http://publications.gc.ca/site/eng/9.849592/publication.html>

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3. Has your department or agency considered the Project; exercised a power or performed a duty or function under any Act of Parliament in relation to the Project; or taken any course of action that would allow the Project to proceed in whole or in part?

Specify as appropriate.

No.

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4. Has your department or agency had previous contact or involvement with the proponent or other party in relation to the Project? (for example, enquiry about methodology, guidance, or data; introduction to the project)

Provide an overview of the information or advice exchanged.

No.

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5. Does your department or agency have additional information or knowledge not specified, above?

Specify as appropriate.

No.

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6. From the perspective of the mandate and area(s) of expertise of your department or agency, what are the issues that should be addressed in the impact assessment of the Project, should the Agency determine that an impact assessment is required?

For each issue discussed, provide a concise, plain-language summary that is appropriate for inclusion in the Summary of Issues.

For a project to pose a potential risk to human health through exposure to chemical substances, three criteria must be present: the potential for emissions or the release of contaminants of potential concern (COPCs), potential human receptor(s), and existing pathway(s) for human exposure to COPCs. Human health may also be affected by noise emissions that reach nearby human receptors.

Based on the limited information provided in the initial Project Description (iPD), Health Canada (HC) has identified the following key issues and information requirements that are likely to be relevant to the Heartland Complex Expansion Project (the Project). This however, is not to be construed as an exhaustive list of issues pertaining to human health for this project.

Human Health Setting and Human Impact Assessment

In order to assess potential risks to human health, it is necessary to identify locations of potential human receptors including residences and sensitive human receptor locations (i.e. schools, hospitals, retirement complexes or assisted care homes) through maps and diagrams. The distances between human receptor locations and the key components of the Project that may impact these receptors should be identified. A human health risk assessment (HHRA) that contains all relevant contaminants and potential exposure pathways is also recommended.

In Sections 7 and 15, the iPD presents regional health, social, and socioeconomic benefits but does not include disaggregated information to understand how the project could potentially produce differential impacts on the health of diverse groups of people. Disaggregated information is required to conduct gender-based analysis plus (GBA+) to understand the differential health impact of the project on women, children and other vulnerable groups (including from a cumulative effects perspective), and should be incorporated in the proposed socioeconomic impact analysis.

Air Quality

Ambient air quality may be affected by exhaust emissions from machinery, fugitive dust, and fuel combustion by-products during construction, operation, and decommissioning. The iPD highlights exceedances of Alberta Ambient Air Quality Objectives (AAAQOs) in the Heartland region for sulphur dioxide (SO₂), hydrogen sulphide (H₂S), benzene, and fine particulate matter (PM_{2.5}). The iPD also acknowledges that there is potential for negative effects from acidifying emissions related to the project. As a result, the proponent has identified the need to undertake an air quality impact assessment.

With respect to the proposed evaluation of air quality, HC is of the opinion that the most stringent ambient air quality standards² or objectives should be used to undertake an assessment of existing (baseline) and predicted future (project-only, project + baseline, cumulative) air quality (e.g., for nitrogen dioxide (NO₂), SO₂, PM_{2.5}, H₂S, benzene, PAHs, and ozone). HC also notes that equipment to be used during both the Project construction and operation phases will use diesel fuel. As such, the health effects of diesel exhaust and diesel particulate matter (DPM) should also be assessed, including the carcinogenic and non-carcinogenic effects of DPM (separate from fine particulate matter). Furthermore, given that there are already noted exceedances of air contaminants (SO₂, H₂S, benzene, and PM_{2.5}) within the Heartland region, a detailed analysis of cumulative air quality impacts should be included.

Noise

Ambient noise levels may increase due to machinery use, construction activities, and increased traffic during the construction and operation phases of the Project. The detailed project description should contain a more complete description of the project, timing of construction, and operational activities as they relate to noise impacts. The noise assessment should identify, locate, and describe all relevant human receptors that may have a heightened sensitivity to noise exposure (e.g. Indigenous peoples, schools, children care centres, places of worship, etc.). Furthermore, an assessment of cumulative impacts should be included given that significant existing and proposed regulated industrial noise sources have been identified nearby (Section 14).

Water Quality

Surface water may be impacted by spills of fuels, hydrocarbons, chemicals, and waste products used for the Project during construction and/or operation of the facility. This has the potential to impact recreational water quality. Local alterations to ground water patterns may also affect the quality of potable water sources, particularly for land users. Although the iPD indicates there is little potential for groundwater impacts (given the underlying geology/hydrogeology), the detailed project description should still identify the location of local and regional drinking water sources as well as drinking water treatment facilities, their proximity to the Project site, and the potential for the project to impact these drinking water sources.

Country Foods

Although the iPD states that the proponent is not aware of any anticipated impacts on hunting, fishing or gathering uses at the Project site, country food impacts may still be identified at a later stage. HC notes that there is potential for project-related deposition of pollutants on terrestrial vegetation or surface water as a result of surface

² The Canadian Ambient Air Quality Standards (CAAQS) consider nitrogen dioxide, fine particulates and ozone to be "non-threshold" air pollutants; meaning that health effects may occur at any level of exposure.

disturbance and emissions from construction activities and operation. These pathways should be assessed in the proposed HHRA.

Brenda Woo

Name of Departmental / Agency Responder

Regional Manager,
Environmental Health Program Alberta Region
Regulatory Operations and Enforcement Branch

Title of Responder

December 8, 2020

Date