

## **Environmental Defence Canada**

### Consultation on Reduction in the Release of Volatile Organic Compounds (Storage and Loading of Volatile Petroleum Liquids) Regulations

Submitted to:

Environment and Climate Change Canada

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#### **About Environmental Defence Canada**

Environmental Defence Canada is a leading Canadian environmental advocacy organization that works with government, industry and individuals to defend clean water, a safe climate and healthy communities.

## **Response to the Reduction in the Release of Volatile Organic Compounds (Storage and Loading of Volatile Petroleum Liquids) Regulations**

### Introduction:

The publication of the proposed *Reduction in the Release of Volatile Organic Compounds Regulations* in Canada Gazette, Part 1, is a positive step in mitigating the emissions of benzene and other carcinogenic Volatile Organic Compounds (VOCs) during the storage and loading of petroleum liquids. VOCs pose significant environmental and health risks to surrounding communities upon release.

Benzene and other VOCs have damaging effects on both air quality and human health. They contribute to the formation of ground-level ozone and smog, which can lead to respiratory issues such as asthma and chronic obstructive pulmonary disease (COPD). Long-term exposure to benzene has been linked to various forms of cancer, including leukemia.

Indigenous communities, including the Aamjiwnaang First Nation, have long expressed concerns regarding the discharge of toxic chemicals from petroleum storage and loading facilities, many of which are located in close proximity to their communities. For decades, existing provincial and municipal measures have been inadequate in addressing these concerns and safeguarding the health and safety of nearby communities. Just last week, ambient levels of benzene in the air in Aamjiwnaang were found to be more than 300 times higher than the air quality guideline in Ontario. Ineos Styrolution, which uses benzene to produce styrene – a precursor to the plastic polymer polystyrene—has been under unenforced orders from the Ontario Government for high benzene emissions since 2019. With these regulations, the federal government has a chance to address a significant gap by forcing industrial operators to reduce the release of VOCs from their operations.

To ensure that these regulations are effective in achieving their goals, the federal government must implement the recommendations below to strengthen the regulations and move urgently to finalize and enforce these regulations. Additionally, the federal government should also include strict enforcement penalties for non-compliance by refineries and other petroleum and petrochemical facilities.

### VOCs are a Byproduct of Oil and Gas Production in Canada:

The release of toxic VOCs from the storage and loading of petroleum liquids is a direct byproduct of oil and gas operations in Canada. While the federal government has adequately communicated the greenhouse gas emissions associated with the production of oil and gas recently, the health impacts of VOCs released through processing oil and gas have not received the same attention.

The release of VOCs from refineries and other oil and gas facilities has compromised the air quality of nearby communities, particularly Indigenous communities. The lack of effective communication, monitoring and enforcement from provincial governments has resulted in the concerns of these communities being ignored, while the operators of polluting facilities continue to operate with impunity. This treatment of Indigenous communities runs counter to the principles of reconciliation in Canada, further creating disparities and hindering progress towards meaningful partnership.

The federal government has an opportunity to rebuild trust and prioritize the health of nearby communities by implementing the proposed regulation promptly, establishing robust long-term monitoring systems, and ensuring rigorous enforcement measures to hold refineries and other petroleum facilities accountable. By taking urgent action, the federal government can demonstrate its commitment to protecting the health and safety of nearby communities, addressing environmental injustices and advancing reconciliation with Indigenous peoples, fostering a healthier and more equitable future for all Canadians.

### Canada must monitor and regulate the entire VOC to SVOC range resulting from production in the tar sands.

Evidence from Environment and Climate Change Canada (ECCC) recently demonstrated that total gas-phase organic carbon emissions from tar sands facilities are underreported by 1900% to 6300%<sup>1</sup>. This is due to a lack of monitoring of the full range of emissions, beyond VOCs. Semi-volatile organic compounds (SVOCs) and intermediate volatility organic compounds (IVOCs) from the oil sands pose serious risks to human and ecological health, but are unreported and therefore unregulated.

Local communities, most of which are Indigenous, have been exposed to a significantly higher level of organic carbon emissions than what they were told. The health impacts of this exposure, combined with existing exposure to chemicals of concern from oil sands process water (OSPW), are unknown and have been understudied for decades. It is

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<sup>1</sup> He, M., Ditto, J. C., Gardner, L., Machesky, J., Hass-Mitchell, T. N., Chen, C., Khare, P., Sahin, B., Fortner, J. D., Plata, D. L., Drollette, B. D., Hayden, K. L., B. Wentzell, J. J., Mittermeier, R. L., Leithead, A., Lee, P., Darlington, A., Wren, S. N., Zhang, J., Gentner, D. R. (2024). Total organic carbon measurements reveal major gaps in petrochemical emissions reporting. *Science*. <https://doi.org/adj6233>

paramount for Canada to rectify the environmental injustice taking place in the oil sands region.

### Recommendations:

- **Ensure these regulations are finalized as soon as possible** to protect frontline communities from VOC emissions.
- **Expand RIAS analysis** to include more granular reporting on the level of reduction from specific facilities to better understand how and what communities will be impacted and how the reductions will be distributed across the facilities. Without detailed reporting on reductions, the most vulnerable communities that are in close proximity to these polluting facilities, such as the Aamjiwnaang First Nation, will be left in the dark on the impacts of the proposed regulations as well as the level of toxic VOCs still being emitted from nearby facilities. This is essential information for communities that have been exposed to toxic chemicals for decades.
- **Remove timeline flexibilities** that allow for delay in compliance for tanks and lower-emitting loading racks. As currently proposed, certain facilities will have up to four years to install emissions control equipment on their tanks and an additional 2 years to install emissions control equipment on their loading racks. These delays in compliances further risk the health and safety of nearby communities by exposing them to toxic VOCs. We urge the federal government to remove the timeline flexibilities so that all facilities comply with the proposed regulations at the same time.
- **Require more frequent inspections** for all emissions control equipment in use by facilities. The current inspection intervals in the proposed regulations may result in significant delay in addressing equipment problems that could release toxic VOCs in nearby communities. Environmental Defence supports the inspection times proposed by Canadian Environmental Law Association.
- **Improve transparency** by requiring the release of inspection and repair reports and records from the operators to be made public. We further ask that disclosure of records required under the regulations from VOC emitters be accessible to neighbouring First Nations and municipalities. This will ensure that the impacted communities are aware of the steps nearby facilities are taking to prevent further release of VOCs.
- **Include all sources of emissions, including from plastics production.** VOCs are used and emitted in the production of plastic polymers and their precursors. Regulatory action to prevent emissions of VOCs affecting frontline communities, including Aamjiwnaang and Fort Saskatchewan, Alberta, must therefore be

considered part of a holistic approach to ending pollution related to plastics. We urge the government to include all sources of emissions from the storage and loading of volatile petroleum liquids in the proposed regulations.

- **Take action on the full range of emissions from oil sands operators** by developing monitoring and reporting requirements for the full range of organic carbon emissions emitted in the oil sands, and regulations on these emissions to protect nearby communities.

#### Next steps:

Environmental Defence welcomes the publication of the *Reduction in the Release of Volatile Organic Compounds Regulations* in Canada Gazette as a step in the right direction to mitigate the release of toxic VOCs.

Following the consultation period, the federal government must move swiftly to ensure that the regulations are in place without further delay, while working with provincial and municipal governments to enforce compliance and to establish clear, monitoring and reporting protocols for VOC emissions.

The success of these regulations depends on the federal government's commitment to proactive oversight, transparent communication, and inclusive decision-making. By taking decisive action and fostering collaboration across all levels of government and with Indigenous communities, the federal government can chart a course towards a healthier, more resilient future for all Canadians.

In addition to the VOCs targeted by the regulations discussed in this submission, the government of Canada must rapidly develop monitoring and reporting requirements for the full range of organic carbon emissions emitted by oil sands operators (including SVOCs and IVOCs), and regulate their emissions to protect neighbouring communities and the environment by limiting exposure to these polluting gases.

We would be pleased to meet with you to further discuss our recommendations for strengthening the proposed regulations.