

December 1st, 2022

To: The Honourable Steven Guilbeault, Minister of Environment and Climate Change

Re: Letter from environmental toxicologists, environmental and human health risk assessors and others within the scientific community: Please ensure a transparent, independently reviewed and UNDRIP-compliant consultative process before moving forward with new effluent mine regulations regarding oil sands process water.

To The Honourable Steven Guilbeault,

We, the undersigned scientists, are deeply concerned about regulations being developed by Environment and Climate Change Canada under the *Fisheries Act* that would permit the release of oil sands process water into the Athabasca River. These process waters are highly contaminated with a complex mixture of chemicals that could pose significant risks to human and environmental health due to their known and/or suspected toxicity.

We note that you have announced that a 60-day consultation period for Canada Gazette 1 draft regulations will occur during Winter 2022-23. We ask that before draft regulations are completed and any public consultation begins, the Canadian public be provided access to all of the information described below. We further note that for First Nations and Metis Nations downstream in Alberta and in the Northwest Territories, free, prior and informed consent must be obtained. We ask that the information described below be made available at least 60 days before the public consultation period begins.

Chemical Exposure Characterization:

- For each of the tailings ponds that are the source of the proposed effluent release, a chemical profile with a comprehensive list that characterizes every chemical according to disclosed thresholds that determine whether a chemical is qualified, quantified, identified or excluded.
- The total water volumes to be released from each of the tailings ponds that are the source of the proposed effluent release
- List of substances that would go into the river if released post-treatment, with total planned water volumes and concentration levels throughout the year.
- Comprehensive evaluation and disclosure of the pathways through which human exposure to each substance might occur.
- Assessment of the possible interactions between these substances and risk of bioaccumulation.

- Quantitative estimation of the uncertainty and variability associated with these exposure estimates, using a probabilistic approach

Hazard and Dose-Response Assessment:

- Hazard and dose-response assessment of the substances or mixture named above using a systematic review methodology approach to gathering and synthesizing information
- Identification of any novel chemical interactions

Risk Characterization:

- Comprehensive evaluation of the potential adverse health effects, with uncertainty levels.
 - Risk assessments must be conducted to appropriately assess the risks of combined exposures to multiple chemicals (i.e. using “mixtures” approaches), rather than simply on individual substances
- Explanation as to how a scientifically credible assessment of the efficacy of discharging surface tailings-contaminated water can be made given that exposures through the planned release represent incremental exposures to elevated background exposures due to the existing and growing level of contamination that has happened through tailings pond leakage and evaporation followed by local/regional deposition.
- Explanation as to how scientifically credible assessment of the efficacy of discharging surface tailings-contaminated water given the absence of credible dataset on historic baseline condition of the naturally discharged bitumen into the Athabasca River.

Standard of Care:

We are particularly concerned with how ECCC plans to operationalize your statement that “There will be an anticipated reduction of threats to fish, fish habitat, and human health from fish consumption by improving the management of harmful substances in oil sands mine effluent.”¹ To achieve this goal it is crucial that regulations guarantee that no further harm will be done to human and ecosystem health, by setting a standard of **no further exposure**. Reduced harm from that of ongoing and unchecked tailing pond leakage is an insufficient standard. Can you please explain how you plan to achieve this reduced harm?

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In August 2020 the United Nations Environmental Program released its Global Industry Standard on Tailings Management². Please state whether your government's approach to oil sands tailings ponds is seeking to comply with these standards. If not, which framework and principles are guiding your approach?

Independent Scientific Advice and Review:

The scientific defensibility of any planned treatment and release program will be essential. For this reason we also request that you immediately move to establish an independent science review panel that will advise your staff during the regulatory development process and supervise a peer review process whose results are made publically available at the launch of the public consultation process.

Thank you for your attention to our input on this matter and we look forward to your reply.

Signed,

Reena Sandhu, Toxicologist and Human Health Risk Assessor, SafeDose Ltd

Shanna Swan, Environmental and Reproductive Epidemiologist, Icahn School of Medicine at Mount Sinai, New York

Samantha Green, Family Physician & Assistant Professor, Department of Family & Community Medicine, University of Toronto

Scott Blyth, Family Physician in Manitoba

Gail Fraser, Professor, Faculty of Environmental and Urban Change

Sheila Colla, Assistant Professor, York University

Emenike Chijioko, Assistant Professor, Department of Plant, Food and Environmental Sciences, Dalhousie University

Andrea Hull, Physician, Alberta

Chris Barrington-Leigh, Institute for Health and Social Policy, McGill University

Anthony Ricciardi, Bieler School of Environment, McGill University

Joseph B. Rasmussen, Professor Emeritus, University of Lethbridge

David Rosen, Physician, Mississauga

Laura Chan, ENT surgeon

Laurel Stevenson, Family physician in Manitoba

Melissa Lem, Clinical Assistant Professor, Department of Family Practice, University of British Columbia

Sehjal Bhargava, Public Health and Preventive Medicine & Family Medicine Resident Physician

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Meredith McKague, Physician and Associate Professor Academic Family Medicine, University of Saskatchewan

Cathy MacLean, Physician and Professor Academic Family Medicine, University of Saskatchewan

Gisele S Morier, Psychiatrist and Assistant Professor Department of Psychiatry Rady Faculty of Medicine University of Manitoba

Henrike Rees, Anatomical pathologist at Saskatchewan Health Authority

Mili Roy, Assistant Professor, Faculty of Medicine, University of Toronto.

Teela Johnson, Hospitalist, University of Toronto

Douglas Thompson, Physician and Environment Committee Rotary Club of Stratford.

Naomi Miller, Retired physician.

Tushar Mehta, Physician, William Osler Health Centre

Anne Davis, Clinical Physician

Gordon Yanchyshyn, Psychiatrist

Claire deBoer, Family Medicine Resident, Saskatchewan

Laurette Geldenhuys, Physician, Professor, Dalhousie University

Courtney Howard, Physician and Past-president Canadian Association of Physicians for the Environment

Tim K Takaro, Professor Emeritus, Simon Fraser University

Miriam L Diamond, Professor, Department of Physical and Environmental Sciences, University of Toronto

Crystal Stamp-Cardinal, an advocate for Indigenous knowledge inclusion from Saddle Lake Cree Nation

Leah Leon, Qualified Persons for Risk Assessment., Senior Risk Assessment Specialist.

Kristen Wareham, Physician, Manitoba

MJ Hanley, Environmental Scientists, Ontario

Rae Smith, retired registered nurse and CAPE member

Marilyne Tovar, Registered Nurse, member of the Canadian Association of Nurses for the Environment