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The Royal Society of Canada Expert Panel on the Environmental and Health Impacts of Canada's Oil Sands Industry

Final Report

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Feasibility of reclamation and adequacy of financial security

- Reclamation is not keeping pace with the rate of land disturbance.
- Research indicates that sustainable uplands reclamation is achievable and ultimately should be able to support traditional land uses.
- Current practices for obtaining financial security for reclamation liability leave Albertans vulnerable to major financial risks.

Impact of oil sands contaminants on downstream residents

- There is currently no credible evidence of environmental contaminant exposures from oil sands reaching Fort Chipweyan at levels expected to cause elevated human cancer rates.

- More monitoring focused on human contaminant exposures is needed to address First Nation and community concerns.

Impacts on population health in Wood Buffalo

There is population level evidence that residents of the Regional Municipality of Wood Buffalo experience a range of health indicators which are:

- consistent with «boom town» impacts and community infrastructure deficits
- poorer than those of a comparable Alberta region and provincial averages.

Impacts on regional water supply

Current industrial water use demands do not threaten the viability of the Athabasca River system if the Water Management Framework developed to protect in-stream ecosystem flow needs is fully implemented and enforced.

Impacts on regional water quality and groundwater quantity

- Current evidence on water quality impacts on the Athabasca River system suggests that oil sands development activities are not a current threat to aquatic ecosystem viability.
- However, there are valid concerns about the current Regional Aquatics Monitoring Program (RAMP) that must be addressed
- The regional cumulative impact on groundwater quantity and quality has not been assessed.

Tailings pond operation and reclamation

- Technologies for improved tailings management are emerging but the rate of improvement has not prevented a growing inventory of tailings ponds.
- Reclamation and management options for wet landscapes derived from tailings ponds have been researched but are not adequately demonstrated.

Impacts on ambient air quality

- The current ambient air quality monitoring data for the region show minimal impacts from oil sands development on regional air quality
  except for noxious odour emission problems over the past two years.
- Control of No_x emissions and regional acidification potential remain valid concerns.

Impacts on greenhouse gas emissions (GHG)

- Progress has been made by the oil sands industry in reducing its direct GHG emission per barrel of bitumen produced.
- Nonetheless, increasing direct GHG emissions from growing bitumen production create a major challenge for Canada to meet our international commitments for overall GHG emission reduction.
- Current technology options do not resolve this challenge.

Environmental regulatory performance

- The environmental regulatory capacity of the Alberta and Canadian Governments does not appear to have kept pace with the rapid growth of the oil sands industry over the past decade.
- The EIA process relied upon by decision-makers to determine whether proposed oil sands projects are in the public interest has serious deficiencies in relation to international best practice.
- Environmental data access for cumulative impact assessment needs to improve.