

Format for submitting pursuant to Article 8 of the Stockholm Convention the information specified in Annex E of the Convention

Introductory information	
Name of the submitting Party/observer	Canada
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Chemical name (as used by the POPs Review Committee (POPRC))	Lindane
Date of submission	January 27, 2006

(a) Sources, including as appropriate (provide summary information and relevant references)	
(i) Production data:	
Quantity	
Location	
Other	
(ii) Uses	
(iii) Releases:	
Discharges	
Losses	
Emissions	
Other	

(b) Hazard assessment for endpoints of concern, including consideration of toxicological interactions involving multiple chemicals (provide summary information and relevant references)

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(c) Environmental fate (provide summary information and relevant references)	
Chemical/physical properties	
Persistence	
How are chemical/physical properties and persistence linked to environmental transport, transfer within and between environmental compartments, degradation and transformation to other chemicals?	
Bio-concentration or bio-accumulation factor, based on measured values (unless monitoring data are judged to meet this need)	

(d) Monitoring data (provide summary information and relevant references)
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1) Pesticides in Ambient Air in Alberta.

Alberta accounts for approximately 25% of the agricultural pesticides (herbicides, fungicides and insecticides) sold in Canada each year. A project was undertaken in 1999-2000 by Alberta Environment to characterize the pesticides found in a number of Alberta locations and to determine their relative levels and seasonality.

Lindane levels are high in the month of May and then slowly decline through the summer months. No lindane was detected in the samples in April and the levels had gone down to not detectable by the end of September (Figure 1). As lindane is used on treated seed that is planted in April and early May, lindane is then released into the atmosphere following seeding and hence the higher levels in May followed by a slow decline to low and/or undetectable levels in August and September.

Source: Kumar, Y. 2001. Pesticides in Ambient Air in Alberta. ISBN 0-7785-1889-4. Report prepared for the Air Research Users Group, Alberta Environment, Edmonton, Alberta.

http://www3.gov.ab.ca/env/protenf/pesticide/publications/info/Pesticides_in_Ambient_Air_Report.pdf

2) Baseline Pesticide Data For Semi-Permanent Wetlands In The Aspen Parkland of Alberta

Semi-permanent wetlands in the Aspen Parkland eco-region are important habitat for migratory waterfowl and offer valuable habitat for pairing and brood rearing. A water quality study was conducted to establish pesticide baseline data for these wetlands. A second objective of this study was to evaluate, at a scoping level, the potential importance of atmospheric loading of pesticides to these wetlands. The literature documents the importance of overland runoff as a pathway of pesticide movement to surface waters, but increasing evidence also points to the importance of atmospheric deposition.

Mass balance results suggest that atmospheric deposition may account for a substantial portion of concentrations detected in wetlands for some pesticides (i.e., 2,4-D and MCPA: >90%; glyphosate: 40% and lindane: 30%).

Source: Anderson, Anne-Marie, 2002, G. Byrtus, J. Thompson, D. Humphries, B. Hill, and M. Bilyk. Baseline Pesticide Data For Semi-Permanent Wetlands In The Aspen Parkland of Alberta. *Prepared for:* Alberta Environment Water Research User Group, Alberta Environment Ecosystem User Group, and Alberta North American Waterfowl Management Plan Partnership

<http://www3.gov.ab.ca/env/info/infocentre/publist.cfm>

<http://www3.gov.ab.ca/env/water/reports/BaselinePesticideDataForWetlandsInAspenParkland.pdf>

(e) Exposure in local areas (provide summary information and relevant references)

- general

- as a result of long-range environmental transport
- information regarding bio-availability

(f) National and international risk evaluations, assessments or profiles and labelling information and hazard classifications, as available (provide summary information and relevant references)

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(g) Status of the chemical under international conventions

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