

Pollution Prevention Planning under CEPA as a first step toward a Long-term Strategy for Wastewater Effluents

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Outline

1. Background
2. Proposed Approach
3. Next Steps



Background

- **CEPA process**

- **Risk Assessment:** substance or pollutant of concern identified and scientific assessment complete
- If “**toxic**” per CEPA definition, added to List of Toxic Substances
- **Risk Management:** development of an instrument respecting preventive or control actions - pollution prevention planning one possibility



Risk Assessment

- **Risk assessments completed for:**
 - Ammonia in the aquatic environment
 - Inorganic Chloramines
 - Chlorinated Wastewater Effluents
- **Conclusions:**
 - “toxic” under section 64 of CEPA 1999
 - released to the aquatic environment primarily through wastewater effluents



Risk Management

- **CEPA requirements**

- A preventive and/or control instrument must be developed and proposed within 24 months (before June 23, 2003)
- The final instrument within a further 18 months (before December 2004)



Proposed Approach

- **First Step** - Pollution Prevention Planning under CEPA 1999 for ammonia dissolved in water, inorganic chloramines and chlorinated wastewater effluents
- Develop a long-term strategy for wastewater effluents which considers CEPA 1999 and the Fisheries Act



First step - P2 Planning proposal

- **Proposed Notice**

- published in Canada Gazette, Part I on June 7th, 2003

- **Final Notice**

- before December 7th, 2004



Key elements of proposal

- criteria to select “higher risk” systems
- objectives achievable within timelines
- other factors to consider:
 - process audits and optimization
 - source control for specific substances
 - long-term strategy and Fisheries Act requirement
 - receiving environment monitoring
- Declarations
 - reporting of baseline information, effluent monitoring data, anticipated and completed actions and results



Criteria to Identify Systems

- **Volume of effluent released plus:**
 - Performance
 - disinfection of effluent using chlorine
 - concentration of ammonia
 - Receiving environment for ammonia
 - pH and assimilative capacity (ratio approach)



Risk Management Objectives

Ammonia:

- Reduce to the fullest extent the amount of ammonia in the the release to surface water

Inorganic chloramines and chlorinated wastewater effluent:

- Total residual chlorine concentration less than or equal to 0.02 mg/L in the release to surface water



Other Factors to Consider

- **Environment Canada's envisioned outcomes of a long-term strategy:**
 - control of toxic substances and other pollutants at industrial, commercial and institutional sources
 - treatment equivalent in performance to secondary treatment with additional treatment where required
 - water conservation supported by water metering, and a sustainable approach to financing to ensure ongoing operation, maintenance and upgrade



Other Factors to Consider

Activities for ammonia:

- process system performance audits within 18 months and implementing adjustments and optimization activities within 48 months
- identification of high concentrations from sources discharging to the wastewater collection system within 18 months and implementing within 48 months



Other Factors to Consider

Source control:

- consider expanding the scope of the pollution prevention plan to include source control of the following CEPA-toxic substances:
 - nonylphenol and its ethoxylates
 - effluents from textile mills that use wet processing
 - mercury
 - lead
 - hexavalent chromium compounds
 - inorganic cadmium compounds
 - inorganic arsenic compounds

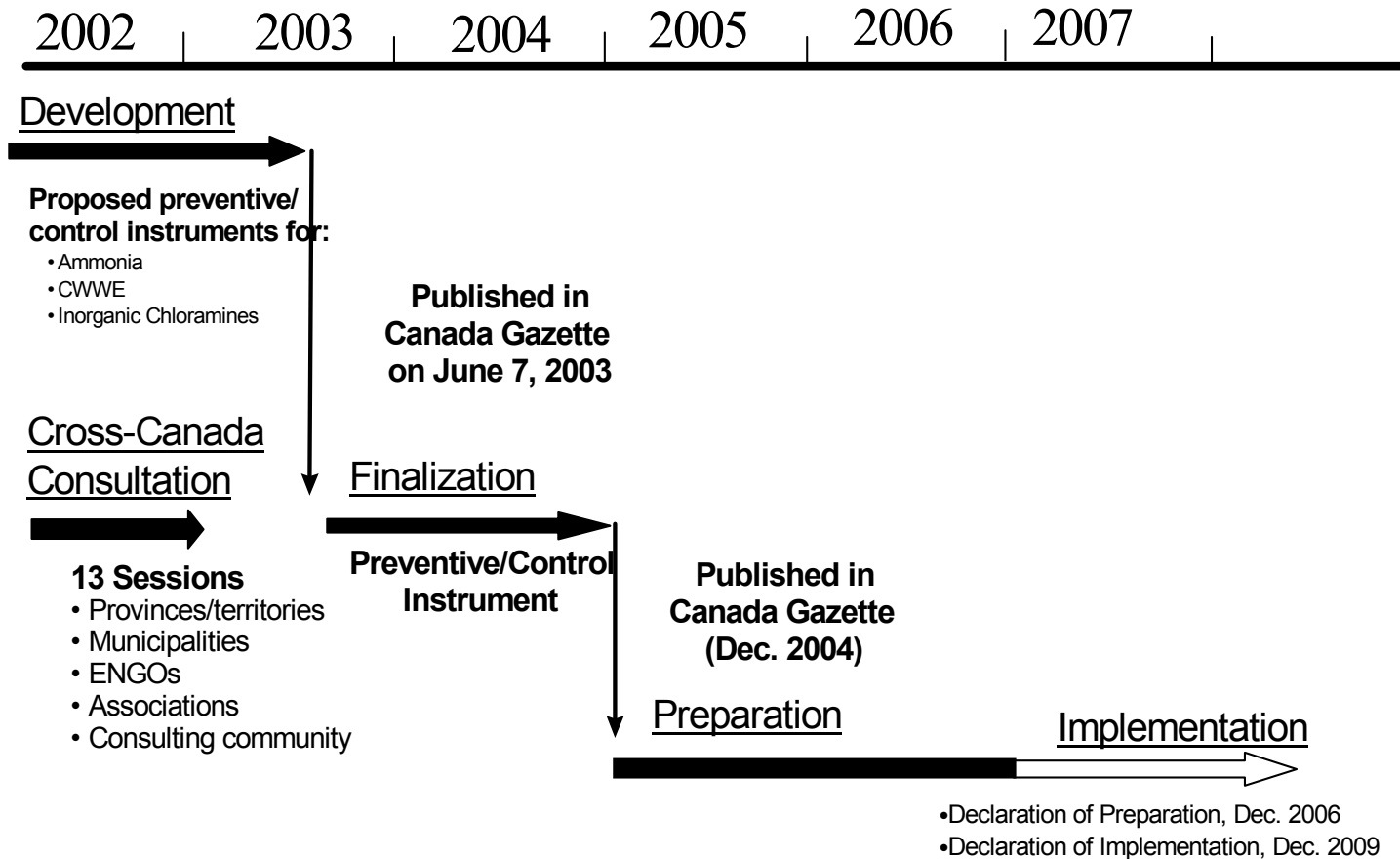


Declarations

- **P2 plan has been prepared and is being implemented (Dec. 2006)**
 - release information (effluent monitoring)
 - anticipated actions and results
- **P2 plan has been implemented (Dec. 2009)**
 - release information (effluent monitoring)
 - completed actions and results



Timelines



Next Steps

- 60-day comment period
 - June 7th, 2003 - August 7th, 2003
- Final Notice before Dec. 7th 2004
- Long-term strategy

