

Canadian Government Maritime Air Quality Initiatives

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Maritime Energy and Clean Emissions Workshop

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**Environment
Canada**

**Environnement
Canada**

Overview

Federal Legislative Authorities

Existing Regulations

IMO Situation

Options for the Future

Other Possibilities

Spring Marine Environmental Workshop

West Coast Situation - Morris Mennell

Federal Legislative Authorities

Canada Shipping Act

- CSA is administered by Transport Canada
- Regulations currently applicable to ship stack emissions

Canadian Environmental Protection Act

- CEPA is administered by Environment Canada
- Extensively revised in 1999
- Not directly applicable to emissions from large vessels
- May be applicable to marine fuel specification

Canada Shipping Act

Part XV of Act - “Pollution Prevention and Response” - gives authority to regulate air pollutants

“Regulations Respecting Air Pollution from Ships”

- “No person shall operate or permit the operation of any fuel burning installation on a ship so that smoke is emitted in greater density than the maximum density authorized by this section.”

Canada Shipping Act

Smoke density limits (1 to 5) related to location and duration.

References to “hand-fired boilers” and “new fires being lit”.

Insufficiently specific on emissions and outmoded.

Limited applicability (1 mile from shore).

Does not address issue of cargo emissions.

Canadian Environmental Protection Act

Broad-based Act containing many powers to regulate emissions from vehicles and specifications of fuels.

Presently used to enforce emissions standards for new light and heavy duty vehicles.

Developing regulations to limit sulphur content of on-road diesel.

Environment Canada has general policy of harmonization with U.S.A. while also considering EU requirements.

Canadian Environmental Protection Act

Applies to Marine Sector exhaust emissions excluding marine diesel engines over 50hp.

Current work on small marine and outboards

Option to use powers controlling production, import and sales of fuels.

EC exploring options.

Canadian IMO Position

Canada acceded to MARPOL 73/78 in 1992

Canada plans to ratify IMO 1997 Protocol and incorporate Annex VI into national regulations (CSA) by early 2003

Voluntary compliance with the NO_x Technical Code for diesel engines over 130 kW installed on new or rebuilt ships as of January 1, 2000.

IMO Annex VI Protocol

1997 Protocol Annex VI - Regulations for the Prevention of Air Pollution from Ships

In force 12 months after acceptance by at least 15 states with not less than 50% of world merchant shipping tonnage

Limits sulphur oxides (SO_x) and nitrogen oxides (NO_x) emissions from ship exhausts. Mandatory NO_x Technical Code, developed by IMO, defines how this is to be done.

IMO Annex VI Protocol

Global cap of 4.5% (mass) sulphur in fuel oil and call for IMO to monitor worldwide average sulphur content

Provides for special "SO_x Emission Control Areas". 1.5% (mass) fuel sulphur limit, or alternatively fit exhaust gas cleaning system or use technological method to limit SO_x emissions.

Baltic Sea designated as SO_x Emission Control Area

IMO Annex VI Protocol

Prohibits deliberate emissions of ozone depleting substances including halons and chlorofluorocarbons (CFCs).

New halon and CFC installations prohibited on all ships, but hydro-chlorofluorocarbons (HCFCs) permitted until 1 January 2020.

Future Options

Update CSA Regulations to refer to specific emissions. e.g. NOx and PM limits

- Policy for on-road emissions and fuels is harmonisation with U.S.A.

Regulate fuels through CEPA

- International effect will depend on regulations defining imports

Pursue IMO special area

Future Transport Canada Directions

Seek global solution to GHG reduction

More stringent national and regional regulations tailored for the Canadian context

Focus research on emissions technology for medium speed engines for marine and rail applications

Address issue of cargo off-gassing

- Estimate 0.25% of cargo released

Other Possibilities

Voluntary Memoranda of Understanding
with Shipping Lines or Associations

Provincial Agreements and/or legislation

Municipal Agreements and/or legislation

Consistent approach with adjacent U.S.
areas

Spring Workshop

Ships' Emissions Workshop

Session on Air Emissions

Organised by Air and Waste
Management Association (AWMA);
Environment Canada ; Transport
Canada

Vancouver - Renaissance Harbourfront
Hotel - April 25 and 26