



*Ozone Protection Programs, Fact Sheet No. 2009-02*

## **Phase-out and Disposal of Halons in Fire-extinguishing Systems in Canada**

This fact sheet aims to inform owners of halon fire-extinguishing systems and personnel servicing these systems of the phase-out requirements and disposal options for these systems in Canada.

### **Controls on Manufacture, Import and Export of Halons**

The federal *Ozone-depleting Substances Regulations, 1998* (ODSR 1998) regulate the manufacture, import and export of ozone-depleting substances (ODS), including halons, in Canada. With respect to halons, the ODSR 1998 reaches its objective of reducing the production and consumption of ODS by:

- banning the manufacture, import and export of bulk new halon
- not allowing the import, for use in Canada, of bulk used, recovered, recycled, or reclaimed halon
- not allowing the export of halons to another country except for essential purposes, reclamation or destruction
- prohibiting the manufacture and import of products that contain or are designed to contain halons (such as fire-extinguishing systems) except for use in aircraft, military ships or military vehicles

The ODSR 1998 allows for some exceptions to the first three prohibitions described above, however only if authorized under a permit issued by Environment Canada. Further information on these exceptions, the permitting process, and importing and exporting halons and halon-containing products may be obtained by contacting Environment Canada's Ozone Protection Programs (contact information is found on page 5).

### **Controls on Use and Handling of Halons**

In addition to being ozone-depleting substances, halons are greenhouse gases. In order to reduce and prevent emissions of halons in Canada, the use and handling of halons are regulated by the provinces/territories in their respective jurisdictions, and through the *Federal Halocarbon Regulations, 2003* (FHR 2003) for systems under federal jurisdiction.

**If a halon fire-extinguishing system is not subject to the FHR 2003, it falls under provincial/territorial jurisdiction and is subject to the applicable provincial or territorial regulations.**

- **Important note for fire-extinguishing systems regulated under the FHR 2003:**

The Federal Halocarbon Regulations 1999, which preceded the FHR 2003, prohibited the installation of halon fire-extinguishing systems, unless authorized to do so by a permit issued by Environment Canada. The FHR 2003 include a similar prohibition. Halon fire-extinguishing systems that were installed before these prohibitions were put in place can continue to operate, however there are restrictions on recharging these systems:

- **Portable systems:** *It is prohibited to charge a portable system with halon, except for use on an aircraft, military vehicle or military ship, or unless authorized to do so by a permit issued under the FHR 2003.*
- **Non-portable (i.e. fixed) systems:** *After December 31<sup>st</sup>, 2009, the one-time charging allowance provided for in s.30 of the FHR 2003 for fixed systems no longer applies, and therefore a fixed system cannot be charged with halon, except for use on aircraft, military vehicle or military ship, or unless authorized to do so by a permit under the FHR 2003.*

For information regarding requirements for fire-extinguishing systems under the federal jurisdiction, contact Environment Canada's Ozone Protection Programs (see page 5).

**Link to the FHR 2003:** <http://laws.justice.gc.ca/PDF/Regulation/S/SOR-2003-289.pdf>

- **Fire-extinguishing systems regulated under the provinces/territories:**

***Provincial/territorial requirements may differ from those prescribed in the FHR 2003.***

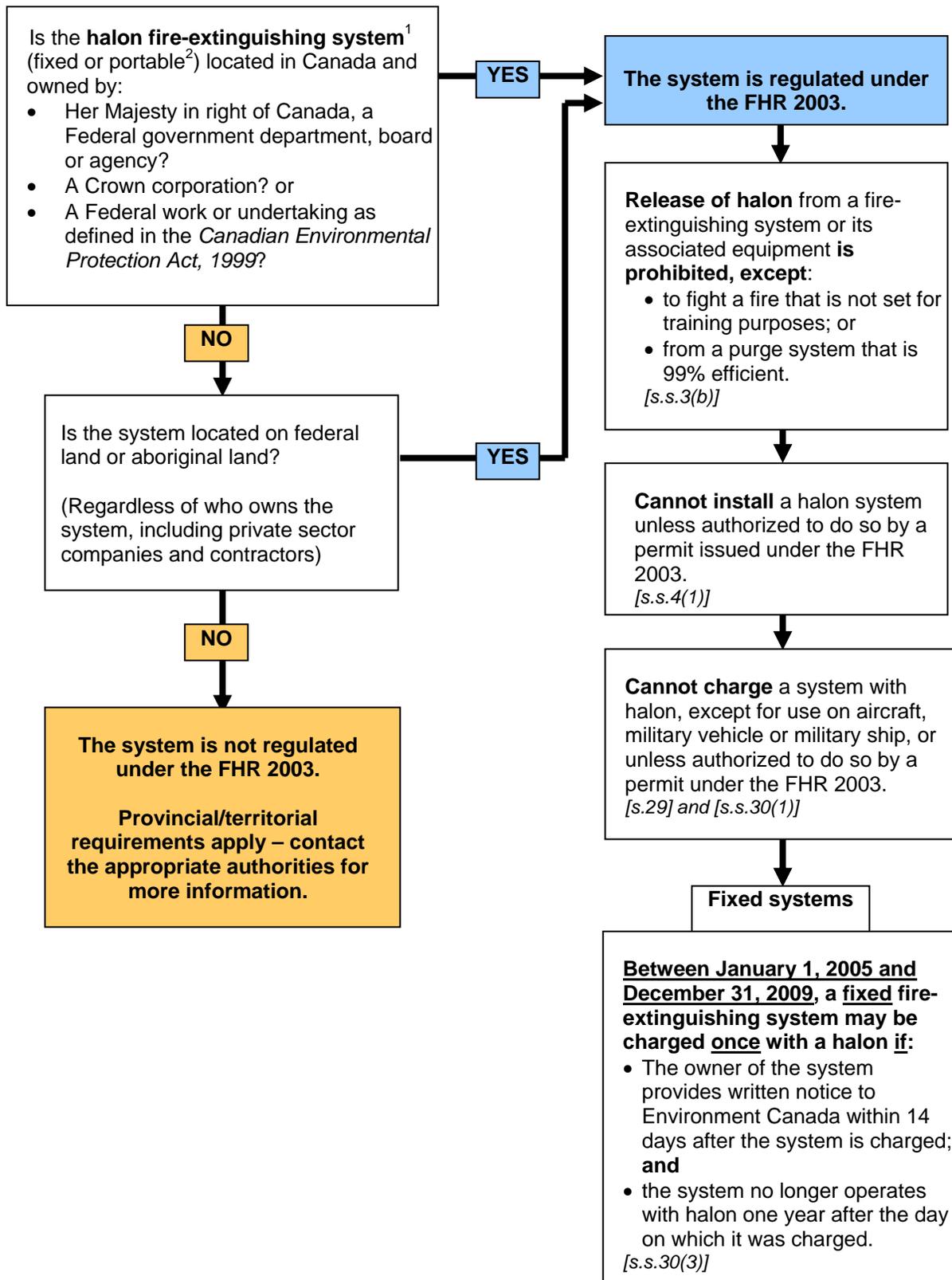
For information regarding requirements for systems under provincial or territorial jurisdiction, please contact the appropriate authority in your region. Contact information is available at the following link:

<http://www.ec.gc.ca/ozone/docs/resources/en/non-ECcontacts.cfm>

**Links to Provincial and Territorial Acts and Regulations on halocarbons can be found here:**

[http://www.ec.gc.ca/ozone/docs/regulations/prov\\_terr/regs/en/prov-terr\\_reg.cfm](http://www.ec.gc.ca/ozone/docs/regulations/prov_terr/regs/en/prov-terr_reg.cfm)

The following chart will help you determine what provisions regarding phase-out of halons apply to your halon fire-extinguishing system(s) (section nos. refer to the applicable FHR 2003 provisions):



1. A fire-extinguishing system means fire-extinguishing equipment, including portable or fixed equipment and any associated equipment, that contains or is designed to contain a halocarbon fire-extinguishing agent.  
 2. A portable fire extinguisher is a cylinder or cartridge that has a charging capacity of 25 kg or less and that can be carried or wheeled to the site of a fire.

## Requirements for Decommissioning Halon Fire-Extinguishing Systems and Recovery of Halons

### **Halons must be properly recovered from decommissioned systems to prevent releases**

Extreme care must be taken when decommissioning a halon fire-extinguishing system to prevent releases. Before a system is decommissioned, dismantled or destroyed, the halon must be recovered in accordance with the standard *Halocarbon Clean Agent Recovery and Reconditioning Equipment* (ULC/ORD-C1058.5-2004). Additionally, work performed on halon fire-extinguishing systems must be done according to the standard *The Servicing of Halon and Clean Agent Extinguishing Systems* (ULC/ORD-C1058.18-2004).

The FHR 2003 requires that halons be recovered, stored and transported in containers designed and manufactured to be refilled and to contain that specific type of halon. If halons are stored, they must be contained in appropriate containers that are stored in a dry, clean environment to prevent corrosion. It is strongly recommended that storage containers be visually inspected regularly, as an additional measure to prevent releases. Containers must be stored in compliance with applicable occupational health and safety regulations and fire and building codes. Storing unwanted halons is not advised. Refer to the next section for disposal options.

Be advised that additional requirements concerning transportation and shipping of surplus halons may apply, including but not limited to the *Transportation of Dangerous Goods Regulations*. Halons designated as hazardous waste are subject to further shipping requirements. It is highly recommended that Transport Canada's Transport Dangerous Goods Directorate (<http://www.tc.gc.ca/tdg/menu.htm>) be contacted, as well as the applicable provincial and territorial authorities (see page 5), prior to shipping surplus halons.

## Guidance on Disposal of Halons

### **Disposal options in Canada**

Halon-containing fire-extinguishing systems must be properly disposed of at the end of their useful life. Proper disposal means having the system decommissioned and any halon recovered by a technician operating in accordance with ULC standards C1058.18-2004 and C1058.5-2004. Halon recovered from decommissioned systems is typically either:

- Recycled or reclaimed for use in Canada in existing fire-extinguishing systems that are exempt from the charging prohibition (aircraft, military vehicles and military ships)
- Exported to the United States for destruction; or
- Exported to the United States for halon banking, which assists sellers wishing to dispose of halon in a responsible manner, and helps buyers with "critical uses" locate supplies of Halon 1301 and Halon 1211 for recharging their existing systems. For information on halon banking in the US, contact the US Environmental Protection Agency (US EPA) Stratospheric Ozone Information Hotline at 1-800-296-1996.

Halon fire-extinguishing service companies or halon recovery/recycling operations certified to ULC standards can assist in determining available disposal options, mentioned above. For information on ULC certified companies in your area please contact the Underwriters'

Laboratories of Canada (ULC):

Tel: 1-866-937-3852

Email: [customerservice@ulc.ca](mailto:customerservice@ulc.ca)

[http://www.ulc.ca/ABOUT\\_ULC/customer\\_Servie.asp](http://www.ulc.ca/ABOUT_ULC/customer_Servie.asp)

**Note:** A permit to export the halons to the United States is required under the federal Ozone-depleting Substances Regulations, 1998. Please contact Environment Canada's Ozone Protection Programs for a permit application form. Export of halons may also be subject to other federal and/or provincial regulations related to hazardous waste management.

### **Alternatives to halon fire-extinguishing agents**

Alternative agents and technologies for halon fire-extinguishing systems are available for most applications. When choosing an alternative, one should consider suitability, other applicable Canadian legislation on fire protection, as well as the environmental risks involved, including the ozone-depleting potential and the global warming potential of the fire-extinguishing agent. Environment Canada does not approve or prescribe alternatives to halons. Please contact the applicable provincial or territorial fire code authorities to learn more about how these fire codes apply to halon-alternative fire-extinguishing agents and technologies. A list of these authorities is available on the following website:

[http://www.ulc.ca/regulators/CODE\\_AUTHORITIES\\_IN\\_CANADA.asp#P&TA](http://www.ulc.ca/regulators/CODE_AUTHORITIES_IN_CANADA.asp#P&TA)

Additionally, the following list on the United States Environmental Protection Agency website provides information on some alternatives that exist on the market:

<http://www.epa.gov/ozone/snap/fire/index.html>

**Note:** Fire-extinguishing systems containing halocarbon alternatives to halons, namely HCFCs and HFCs, are regulated under the provincial/territorial ODS and halocarbon regulations in their respective jurisdictions, and through the Federal Halocarbon Regulations, 2003 (FHR 2003) for systems under federal jurisdiction.

### **FURTHER INFORMATION**

**Requests for further information on the ODSR 1998 and FHR 2003 can be forwarded to:**

Ozone Protection Programs  
Chemicals Management Division  
Environment Canada  
351 St. Joseph Blvd., 17<sup>th</sup> floor  
Gatineau, Quebec K1A 0H3  
Tel: 819-997-1640  
Fax: 819-994-0007  
Email: [OzoneProtectionPrograms@ec.gc.ca](mailto:OzoneProtectionPrograms@ec.gc.ca)

or please visit Environment Canada's Stratospheric Ozone website: <http://www.ec.gc.ca/ozone>

Link to the ODSR 1998: <http://laws.justice.gc.ca/PDF/Regulation/S/SOR-99-7.pdf>

Link to the FHR 2003: <http://laws.justice.gc.ca/PDF/Regulation/S/SOR-2003-289.pdf>

**Links to Provincial and Territorial Acts and Regulations on halocarbons can be found here:**

[http://www.ec.gc.ca/ozone/docs/regulations/prov\\_terr/regs/en/prov-terr\\_reg.cfm](http://www.ec.gc.ca/ozone/docs/regulations/prov_terr/regs/en/prov-terr_reg.cfm)

**Contacts for Provincial and Territorial authorities can be found here:**

<http://www.ec.gc.ca/ozone/docs/resources/en/non-ECcontacts.cfm>

## Annex - List of Provincial and Territorial Contacts

<p><b>ALBERTA</b>          Bettina Mueller          Manager, Air Policy Development          Environmental Policy Branch          Alberta Environment          Oxbridge Place, 10th Floor          9860 - 106th Street          Edmonton, Alberta T5K 2J6          Tel: (780) 644-1221          Fax: (780) 422-4192  <a href="mailto:bettina.mueller@gov.ab.ca">bettina.mueller@gov.ab.ca</a></p>	<p><b>BRITISH COLUMBIA</b>          Alisa Williams          Environmental Management Analyst          Ministry of Environment          PO Box 9342 STN PROV GOVT          Victoria, British Columbia V8W 9M1          Tel: (250) 356-9082          Fax: (250) 387-8897  <a href="mailto:Alisa.Williams@gov.bc.ca">Alisa.Williams@gov.bc.ca</a></p>
<p><b>MANITOBA</b>          Karen Warren          Pollution Prevention Branch          Manitoba Conservation          123 Main Street - Suite 160          Winnipeg, Manitoba R3C 1A5          Tel: (204) 945-3554          Fax: (204) 945-1211  <a href="mailto:Karen.Warren@gov.mb.ca">Karen.Warren@gov.mb.ca</a></p>	<p><b>NEW BRUNSWICK</b>          Rejean Doiron          PCB &amp; ODS Program Manager          Project Assessment &amp; Approvals Branch          Department of Environment          Marysville Place, P.O. Box 6000          Fredericton, New Brunswick E3B 5H1          Tel: (506) 453-3796          Fax: (506) 457-7805  <a href="mailto:rejean.doiron@gnb.ca">rejean.doiron@gnb.ca</a></p>
<p><b>NEWFOUNDLAND and LABRADOR</b>          Angela Burrige          Pollution Prevention Division          Department of Environment and Conservation          P.O. Box 8700          St. John's, Newfoundland A1B 4J6          Tel: (709) 729-4273          Fax: (709) 729-6969  <a href="mailto:angelaburrige@gov.nl.ca">angelaburrige@gov.nl.ca</a></p>	<p><b>NORTHWEST TERRITORIES</b>          Aileen Stevens          Air Quality Programs Co-ordinator,          Environmental Protection Section,          Environment Division          Dept. of Environment and Natural Resources          PO Box 1320          Yellowknife, Northwest Territories X1A 2L9          Tel: (867) 873-7758          Fax: (867) 873-0221  <a href="mailto:aileen_stevens@gov.nt.ca">aileen_stevens@gov.nt.ca</a></p>
<p><b>NOVA SCOTIA</b>          Brent Baxter          Manager          Pollution Prevention Branch          Nova Scotia Department of Environment          P.O. Box 442          Halifax, Nova Scotia B3J 2P8          Tel: (902) 424-2534          Fax: (902) 424-0503  <a href="mailto:baxterbk@gov.ns.ca">baxterbk@gov.ns.ca</a></p>	<p><b>NUNAVUT</b>          Department of Environment          Box 1000, Stn. 1195          Iqaluit, Nunavut X0A 0H0          Department of Environment - General          Inquiries          Tel: (867) 975-5900  <a href="mailto:environment@gov.nu.ca">environment@gov.nu.ca</a></p>

<p><b>ONTARIO</b>  Craig Mazin  Senior Policy Analyst  Air Policy and Climate Change Branch  Ministry of the Environment  135 St. Clair Ave. W., 1<sup>st</sup> Floor  Toronto, Ontario M4V 1P5  Tel: (416) 326-8080  Fax: (416) 314-4128  <a href="mailto:Craig.Mazin@ontario.ca">Craig.Mazin@ontario.ca</a></p>	<p><b>PRINCE EDWARD ISLAND</b>  Debbie Johnston  PEI Department of Fisheries, Aquaculture &amp; Environment  P.O. Box 2000  Charlottetown, Prince Edward Island  C1A 7N8  Tel: (902) 368-5059  Fax: (902) 368-5830  <a href="mailto:Dajohnston@gov.pe.ca">Dajohnston@gov.pe.ca</a></p>
<p><b>QUEBEC</b>  Daniel Champagne  Ministère du Développement durable, de l'Environnement et des Parcs  Direction des politiques de la qualité de l'atmosphère  675, boulevard René-Lévesque E., 6th floor  Quebec City, Quebec G1R 5V7  Tel: (418) 521-3813 extension 4977  Fax: (418) 646-0001  <a href="mailto:daniel.champagne@mddep.gouv.qc.ca">daniel.champagne@mddep.gouv.qc.ca</a></p>	<p><b>SASKATCHEWAN</b>  Sarah Gammell  Environmental Protection Branch  Saskatchewan Ministry of Environment  3211 Albert Street  Regina, Saskatchewan S4S 5W6  Tel: (306) 787-9301  Fax: (306) 787-0197  <a href="mailto:Sarah.Gammell@gov.sk.ca">Sarah.Gammell@gov.sk.ca</a></p>
<p><b>YUKON</b>  Catherine Henry  Department of Environment  Box 2703  Whitehorse, Yukon Y1A 2C6  Tel: (867) 667-5456  Fax: (867) 393-6205  <a href="mailto:Catherine.Henry@gov.yk.ca">Catherine.Henry@gov.yk.ca</a></p>	