

# **APPENDIX A**

## **Halocarbon Management Procedure/Overview and SOPs**

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# Halocarbon Management Procedure/Overview and SOPs

Version 3.0

April 2018

Regional Office of Environmental Coordination  
Newfoundland and Labrador Region







# Procedure for the Management of Halocarbons



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### 1.0 Purpose

The purpose of this procedure is to clearly identify the actions that sites and facilities must undertake to achieve and maintain compliance with the *Federal Halocarbon Regulations, 2003 (SOR/2003-289) (FHR)*.

### 2.0 Overview

Halocarbons are compounds that consist of carbon combined with one or more halogens such as a fluorocarbon. Some halocarbons are broken down by UV rays in the upper atmosphere and release free halogen atoms that damage the ozone layer. Halocarbons have also been implicated as greenhouse gases.

### 3.0 Halocarbon Containing Equipment

Halocarbons are typically found in the following **Types of Equipment**:

- Air conditioner
- Refrigerator
- Chiller
- Old halon-containing fire extinguishing system
- Solvent system
- Vehicle
- Storage containers

This equipment can be further delineated into **System Types**. Each system type is described below:

System Type	Description
<b>Large Refrigeration/AC System</b> (> 19kW (5.4 tons))	<ul style="list-style-type: none"> <li>• A refrigeration or air conditioning system, other than one that normally operates in, on or in conjunction with a means of transportation, that has a refrigeration capacity of at or more than 19kW (5.4 tons) as rated by the manufacturer</li> <li>• Requires installation services by a qualified contractor who holds a <i>Refrigeration Code of Practice (Environmental Awareness in ODS)</i> certificate<sup>1</sup>, the <i>Trade Qualification Certificate</i>, and has reviewed the <i>Federal Halocarbon Regulation</i> contractor document</li> <li>• Certified technicians/contractors must review the Federal Halocarbon Regulations (FHR) document (<b>Appendix A</b>)</li> </ul>

<sup>1</sup> “Refrigerant Code of Practice” means the *Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air-Conditioning Systems*, published by the Department of the Environment in March 1996.



System Type	Description
	<ul style="list-style-type: none"> <li>• Examples:               <ul style="list-style-type: none"> <li>○ Main building chillers</li> <li>○ Commercial freezers</li> <li>○ Commercial refrigerators</li> <li>○ Roof-top air conditions</li> <li>○ Large compressors</li> <li>○ Chillers</li> <li>○ Heat pumps</li> </ul> </li> </ul>
<b>Small Installed Refrigeration and AC System (&lt;19 kW (5.4 tons))</b>	<ul style="list-style-type: none"> <li>• Refrigeration capacity of less than 19 kW (5.4 tons) refrigeration output capacity as rated by the manufacturer</li> <li>• Requires installation services by a qualified contractor who holds a <i>Refrigeration Code of Practice (Environmental Awareness in ODS)</i> certificate, the <i>Trade Qualification Certificate</i>, and has reviewed the <i>Federal Halocarbon Regulation</i> contractor document</li> <li>• Examples:               <ul style="list-style-type: none"> <li>○ Heat pump</li> <li>○ Chiller</li> </ul> </li> </ul>
<b>Small Packaged System:</b>	<ul style="list-style-type: none"> <li>• Refrigeration capacity of less than 19kW (5.4 tons) refrigeration output capacity as rated by the manufacturer</li> <li>• Does not require installation services by a qualified contractor</li> <li>• Examples:               <ul style="list-style-type: none"> <li>○ Domestic or commercial refrigerator/freezer</li> <li>○ Water cooler</li> <li>○ Window air conditioner</li> </ul> </li> </ul>
<b>Fixed Fire-Extinguishing System</b>	<ul style="list-style-type: none"> <li>• Includes all fixed fire-extinguishing systems that contains a halocarbon fire-extinguishing agent</li> </ul>
<b>Portable Fire-Extinguishing System</b>	<ul style="list-style-type: none"> <li>○ Includes all fire-extinguishing cylinders or cartridges that contain halocarbons, weigh 25kg (55 lb) or less and that can be carried or wheeled to the site of a fire</li> </ul>
<b>Solvent System</b>	<ul style="list-style-type: none"> <li>○ A system that uses halocarbons as solvents, including cleaning applications and associated equipment containing or designed to contain a halocarbon solvent</li> </ul>
<b>Vehicle</b>	<ul style="list-style-type: none"> <li>○ Only applicable to vehicles that have an AC that uses halocarbons</li> </ul>

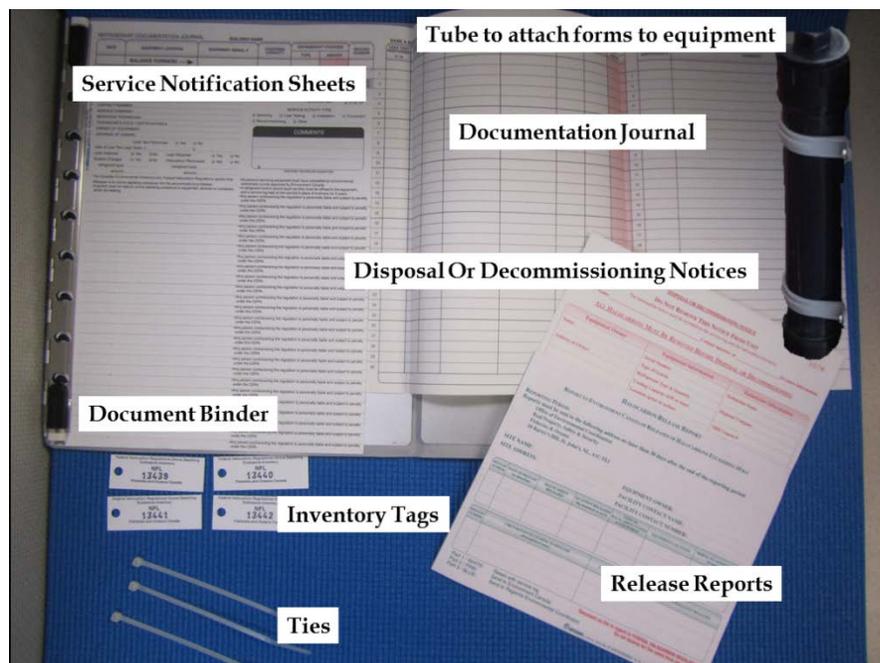


#### 4.0 Halocarbon Management Tool Kit

Proper management of halocarbon containing equipment and accurate record-keeping are important requirements of the *FHR*. Therefore, a halocarbon management tool kit has been developed to ensure compliance with the administrative and record keeping requirements of the *FHR*.

Your halocarbon management tool kit should look like the one pictured in **Figure 1** and includes the following items:

- Halocarbon Reporting Journal (Service Log Journal or Blue Binder)
- Service Notification Sheets
- Inventory Tags
- Release Reports
- Disposal or Decommissioning Notices
- Zip Ties
- Document Tubes
- Halocarbon Inventory (not shown in picture)
- Ownership Validation Forms (not shown in picture)
- Contractor Awareness Documents (not shown in picture)



**Figure 1: Halocarbon Management Tool Kit**

#### 5.0 Tagging and Inventories

All halocarbon-containing equipment must be **tagged** and **inventoried**. Numbered tags (**Figure 2**) have been acquired to identify halocarbon-containing equipment. Tags are to be placed in a visible location on the equipment. If you require a replacement tag, contact ROEC ([ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca)).

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**Figure 2: DFO NL Halocarbon Inventory Tags**

**Inventories** must be completed for all halocarbon containing equipment and updated when identification tags are added or replaced, equipment is added or decommissioned, or when any other inventory information is changed/added/edited.

Inventory forms are available electronically in Microsoft Excel and are broken down into two tabs **In Use** and **Decommissioned or Disposed** (**Note:** In Use tab not available on some inventories). If equipment is disposed or removed from the site, please move the information from the **In Use** tab to the **Decommissioned or Disposed** tab. A step-by-step guide to completing the inventory form is detailed below. **Figure 3** depicts the inventory form template.

***Instructions for Completing a Halocarbon Inventory***

***Step 1:***

Populate all fields on the **In Use** tab of the inventory template for each piece of halocarbon containing equipment on site.

- **DFO Tag Number:** The DFO inventory tag number (NFL XXXX)
- **Facility Name:** Name of Facility equipment is located
- **Equipment Type:** (e.g. air conditioning, refrigeration, fire extinguishing, or solvent)
- **Equipment Make:** Typically on the equipment
- **Equipment Model:** Typically on the equipment
- **Equipment Location:** Building, room, roof-top... Be as specific as possible
- **Equipment Serial Number:** The serial number typically located on equipment nameplate
- **Cooling Capacity:** Typically located in the equipment manual, or ask Service Technician
- **Units:** (i.e. kW, RT or BTU/hr)
- **Refrigerant Type:** Type of halocarbon contained in equipment (e.g. R134a)
- **Refrigerant Quantity in Use (kg):** Typically on the equipment



- **Year Installed**
- **Responsibility Center**

**Step 2:**

Ensure corresponding halocarbon tags are affixed to all equipment listed on the inventory (with the exception of vehicles).

**Step 3:**

Determine if there are any systems on site that are considered **Large Systems** (>19kw (5.4 tons)) or whether there are any **Fixed Halon Fire Suppression Systems** on site. If you have any on these systems you must do the following:

- Leak test each large system or fixed halon fire suppression system once every 12 months
- Complete an **Ownership Validation** form (in **Appendix B**) and send to, Regional Office of Environmental Coordination, [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca)

**Step 4:**

- Print inventory and keep a copy in the service log (blue binder)
- Inventories are to be submitted (in electronic format, preferably using Microsoft Excel) **by January 31 annually** to the Regional Office of Environmental Coordination, [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca)

**Step 5:**

- As equipment is decommissioned or disposed, move inventory information from **In-Use** tab on inventory spreadsheet to **Decommissioned or Disposed** tab on inventory spreadsheet (**Note:** In Use tab not available on some inventories)
- Do not delete information
- Ensure corresponding Disposal or Decommissioning Notices have been completed and are readily available for equipment that is listed on the Decommissioned or Disposed tab

Region	Site Name and Address:												
<b>Air Conditioning/Refrigeration Systems Inventory - LARGE COOLING EQUIPMENT &gt; 5.4 Refrigeration Tons (RT) Capacity (or &gt;19 kW, 25.5 hP, or 64,800 btu/hr)</b>													
NFL HALOCARBON TAG NUMBER	FACILITY NAME	EQUIPMENT TYPE	EQUIPMENT MAKE	EQUIPMENT MODEL	EQUIPMENT LOCATION	EQUIPMENT SERIAL NUMBER	CAPACITY	UNITS	REFRIGERANT TYPE	LIQUID/AIR COOLED	REFRIGERANT QUANTITY IN USE (KG)	YEAR INSTALLED	RESP CENTER
<b>Air Conditioning/Refrigeration Systems Inventory - SMALL COOLING EQUIPMENT &lt; 5 Refrigeration Tons (RT) Capacity (or &lt; 17.6 kW, 23.6 hP, or 60,000 btu/hr)</b>													
NFL HALOCARBON TAG NUMBER	FACILITY NAME	EQUIPMENT TYPE	EQUIPMENT MAKE	EQUIPMENT MODEL	EQUIPMENT LOCATION	EQUIPMENT SERIAL NUMBER	CAPACITY	UNITS	REFRIGERANT TYPE	LIQUID/AIR COOLED	REFRIGERANT QUANTITY IN USE (KG)	YEAR INSTALLED	RESP CENTER
<b>Fire Extinguishing Systems Inventory - Halon</b>													
NFL HALOCARBON TAG NUMBER	NAME	LOCATION OF HALOCARBON SYSTEM	SYSTEM PURPOSE	TYPE OF SYSTEM	EQUIPMENT MAKE	EQUIPMENT SERIAL NUMBER	LAST DATE INSPECTED (DD/MM/YR)	PRESSURE READING (PSI OR BAR)	WEIGHT OF AGENT (KG)	HALON TYPE			

**Figure 3: Inventory Form Template.**

## 6.0 Installation, Servicing, Leak Testing and Charging of Halocarbon and Halon Containing Equipment

All halocarbon containing equipment and fire suppression systems containing halon must be installed, serviced, leak tested and charged in accordance with the FHR. As the requirements of the FHR are complex and detailed, the regional environment office has developed forms and specific instructions to assist staff who own or maintain halocarbon containing equipment.

When undertaking any of the above mentioned activities on halocarbon containing equipment keep the following in mind:

- a) Only a “Certified Person” may install, service, leak test, charge, or do any other work that may result in the release of a halocarbon, and they must do so in accordance with the *Refrigerant Code of Practice*<sup>2</sup> or *The Servicing of Halon Extinguishing Systems (ULC/ORD-C1058.18-1993)*.
- b) A certified person is someone who has completed the *Refrigeration Code of Practice (Environmental Awareness in Ozone Depleting Substances)* training and is trade qualified.<sup>3</sup>

<sup>2</sup> “Refrigerant Code of Practice” means the *Environmental Code of Practice for Elimination of Fluorocarbon Emissions from Refrigeration and Air-Conditioning Systems*, published by the Department of the Environment in March, 1996, as amended from time to time.

<sup>3</sup> In the case of CCG fleet, a trade qualified technician can be a marine engineer with a 3<sup>rd</sup> class certification with specific training on the equipment.

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In addition, the service technician is to be provided with a copy of the *Contractor Awareness Document (Appendix A)*. This is an Environment and Climate Change Canada document that summarizes the contractor's responsibilities under the *FHR*.

Once servicing has been completed,

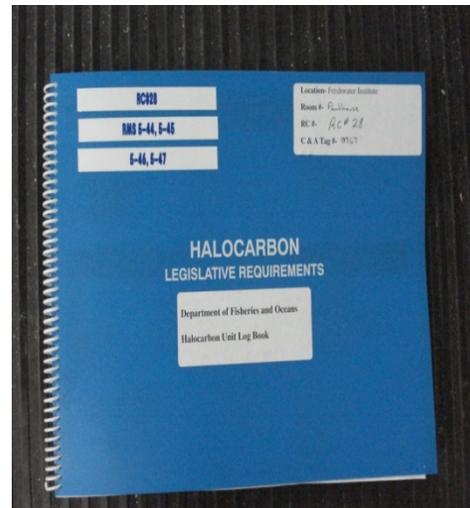
- a) Contractor service notice slip must be completed and affixed to the equipment or stored inside the equipment panel or document tube, and cannot be removed for a minimum of five (5) years. Internal service notice form can be kept in documentation journal or stored with the equipment for a minimum of five (5) years.
- c) Large halocarbon containing equipment (>19kW (5.4 tons) and fixed halon fire suppression systems must be leak tested once every 12 months.
- d) Prior to charging a system, the system must be leak tested. If a leak is detected, the equipment must not be charged. The owner must be notified and the system repaired, isolated or the halocarbon recovered within **7 days**.
- e) Prior to servicing a fixed fire suppression system, the owner must be notified and a notice must be affixed to the control panel indicating that it is out of operation during the period of service.

For documenting activities related to the installation, servicing, leak testing and charging of halocarbon containing equipment, you may use either the Halocarbon Reporting Journal (**Figure 4**) or the Halocarbon Service Log Book (**Figure 5**). **However in order to ensure consistency throughout the Region, it is strongly recommended that all facilities and vessels initiate the use of the Halocarbon Reporting Journal and the associated service notice forms.**

### Recommended



**Figure 4: Halocarbon Reporting Journal**



**Figure 5: Halocarbon Log Book**

**Each Large Refrigeration/AC System (>19kW (5.4 tons)) or Fixed Fire Suppression System should have its own service log book.** However, a single log book can be used for all small equipment on site.

**Documentation Journal**



**Figure 6: Documentation Journal (Actual size 60 cm (23 in) x 28 cm (11 in))**

The **Documentation Journal (Figure 6)** is a two-piece form (**WHITE** and **YELLOW** copy) located in the Halocarbon Reporting Journal. The journal sheets must be filled out completely, with each row of the journal corresponding to one service event (i.e. installation, leak-testing, charging, servicing, or any other work done that may result in the release of a halocarbon). Half of the row is overlapped with the **Service Notice** form. This section of the journal is completed through carbon copying, and the other half of the row must be transferred from the service notice.

Upon filling an entire sheet, the white copy is to be retained on site for **five (5) years** and the **YELLOW** copy sent to:

Regional Office of Environmental Coordination  
 Department of Fisheries & Oceans  
 Northwest Atlantic Fisheries Centre  
 80 East White Hills Road  
 P.O. Box 5667, St. John's, NL A1C 5X1

**Service Notice**

**Service Notices** are located in the Halocarbon Reporting Journal. They are attached to the left side of the binder over top of the documentation journal sheets so that the first line of the notice is carbon copied onto the corresponding line on the documentation journal page (**Figure 6**).

The service notices must be filled out for each service event on each piece of equipment (i.e. installation, leak-testing, charging, servicing, or any other work done that may result in the release of a halocarbon). Instructions for completing services notices are detailed below and **Figure 7** provides an example of a completed service notice.



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DATE	EQUIPMENT LOCATION	EQUIPMENT SERIAL #	CHARGING CAPACITY	TYPE	AMOUNT REFRIGERANT CHARGED	RECORD NUMBER
Feb 12, 2015	Building 7, Rm # 127	8549274	65 Kg	R-134a	65 Kg	3376

**SAFEGUARD - REFRIGERANT SERVICE RECORD**  
Call (800) 955-0885 for information

THIS NOTICE MUST NOT BE REMOVED UNLESS A NEW NOTICE IS ATTACHED

RECORD NO. 3376

BUILDING OPERATOR: Joe Manning  
CONTACT NUMBER: (709) 772-2134  
SERVICE COMPANY: Van Isle Refrigeration  
SERVICING TECHNICIAN: Cyril Gosse  
TECHNICIAN'S O.D.S. CERTIFICATION #: 48965  
OWNER OF EQUIPMENT: Jim O'Brien  
ADDRESS OF OWNER: 187 North Pond Road, Torbay, NL

Leak Test Performed  Yes  No  
Date of Last Two Leak Tests: 1 June 8, 2013 2 June 6, 2014  
Leak Detected  Yes  No Leak Repaired  Yes  No  
System Charged  Yes  No Halocarbon Recovered  Yes  No  
refrigerant type: R-124a amount: 65 Kg refrigerant type: R-134a amount: 50 Kg

SERVICE ACTIVITY TYPE  
 Servicing  Leak Testing  Installation  Conversion  
 Recommissioning  Other

**COMMENTS**  
leak discovered during routine leak test, recovered halocarbon and replaced failed o-ring. Performed second leak test and recharged system.  
Cyril Gosse  
CERTIFIED TECHNICIAN SIGNATURE

The Canadian Environmental Protection Act, Federal Halocarbon Regulations specify that:  
•Release of an ozone depleting substance into the environment is prohibited.  
•A person must not add an ozone depleting substance to equipment, devices or containers which are leaking.

\*All persons servicing equipment must have completed an environmental awareness course approved by Environment Canada.  
•A refrigerant control record (such as this) must be affixed to the equipment, and a service log kept at the servicer's place of business for 5 years.  
•Any person contravening the regulation is personally liable and subject to penalty under the CEPA.

Figure 7: Example of Completed Service Notice

**Instructions for Servicing and Completing a Service Notice**

**\*\*All Large Halocarbon Systems and Fixed Halon Fire Suppression Systems must be leak tested once every 12 months\*\***

**Step 1:**

- Hire a certified technician to undertake required servicing or leak testing
- Provide the Service Technician with a copy of the *Contractor Awareness Document* (Appendix A)

**Step 2:**

Complete the **first line** of the service notice while the record is still attached to the journal.

- **Date:** Date of service event
- **Equipment Location:** Building, room, roof-top... be as specific as possible
- **Equipment Serial Number:** the serial number typically located on equipment nameplate
- **DFO Tag Number:** The DFO inventory tag number (NFL XXXX) – (**Note:** not available on some forms)
- **Charging Capacity:** Typically located in the equipment manual, or ask Service Technician
- **Refrigerant Charged:** Type and amount of halocarbon added during service (**Note:** leave amount field blank if no halocarbon added)
- **Record Number:** This number is located below the cell on the Service Notice form – it provides a cross reference from the service notice to the documentation journal (**Note:** do not enter the contractor's record number in this space)

**Step 3:**

**Fully** complete the rest of the service notice form. (**Note:** only detach service notice from documentation journal *if* there is reason to retain on or in the equipment or document tube, otherwise keep service notice attached in documentation journal for safekeeping and ease of record checking as needed. Contractor's service record will be retained with the equipment as per FHR.



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- **System Operator:** Name of person responsible for the onsite maintenance and management of the halocarbon-containing equipment
- **Contact Number:** Telephone number of the system operator
- **Service Company:** Name of the company employing the certified technician
- **Servicing Technician:** Name of the certified technician servicing the equipment
- **Technician's ODS Certification Number:** Number from *Environmental Awareness in ODS* course
- **Owner of System:** Person or department that owns the equipment (examples: DFO, CCG, Jim Smith, Director RPSS, etc.)
- **Address of Owner:** Site name and address
- **Leak Test Performed:** Select yes or no
- **Date of Last Two Leak Tests:** Unless system is newly installed the last two leak test dates must be entered
- **Leak Detected:** Select yes or no; refers to leak detection discovered by service technician during this visit
- **Leak repaired:** Select yes or no; refers to repairs made by the service technician during this visit
- **System Charged:** Select yes or no; refers to whether the system was charged by the service technician during this visit (\*)
- **Halocarbon Recovered:** Select yes or no; refers to whether halocarbon was recovered from system by service technician during this visit (\*\*)
- **Service Activity Type:** Check box to select applicable activity type
- **Comments:** Reason work performed, what work was performed, and anything else relevant to the work

\* **System Charged:** if yes, then fill in the refrigerant type and amount lines underneath this field. Do not fill in these lines if "no" is selected

\*\* **Halocarbon Recovered:** if yes, then fill in the refrigerant type and amount lines underneath this field. Do not fill in these lines if "no" is selected

**Step 4:**

Either leave service notice in documentation journal (normally recommended), or affix service notice to equipment serviced (optional but may be preferable in some situations) . Retain all service notices onsite for a minimum of five (5) years of date issued.



## 7.0 Release Reporting

Depending on the amount of halocarbon released, there are different reporting requirements and timelines for reporting. Instructions on when to report a release and how to complete a release report are detailed below.

### ***Instructions on When and Whom to Report a Halocarbon Release***

The following reporting requirements apply in the event of halocarbon release. These requirements vary based on 3 categories, releases >100 kg (221b), 10-100 kg (22 lb -220 lb), and <10 kg (22 lb):

#### **Halocarbon Releases –100 kg (220 lb) or More:**

1. **Within 24 hours** of the release discovery, verbally report the release to the Regional Halocarbon Spill Action Centre 1 800 563-9089, or fax/email the report to Environment and Climate Change Canada.

The report must include:

- The **NAME OF THE OWNER**.
- The **TYPE OF HALOCARBON** released.
- The **QUANTITY OF HALOCARBON** released.
- And the **TYPE OF SYSTEM** from which it was released.

2. Immediately report /inform the incident to the Manager, Regional Office of Environmental Coordination:

**Glenn Marshall, Manager, Regional Office of Environmental Coordination**

Department of Fisheries & Oceans  
Northwest Atlantic Fisheries Centre  
80 East White Hills Road

P.O. Box 5667, St. John's, NL A1C 5X1

(709) 772-5692 or [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca)

3. **WITHIN 14 DAYS** after the day the release is detected, submit the **PINK** copy of the *Halocarbon Release Report* to Environment and Climate Change Canada.
4. Send the **BLUE** copy to the Regional Office of Environmental Coordination, [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca). Keep the **WHITE** copy on site for no less than **5 years**.

#### **Halocarbon Releases – Between 10 kg (22 lb)-100 kg (220 lb)**

1. According to the following schedule, send the **PINK** copy to Environment and Climate Change Canada (Environment and Climate Change Canada's mailing address is on the **PINK** form) and the **BLUE** form to the Regional Office of Environmental Coordination, [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca).



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- If the release occurred between January 1 to June 30;  
Send the copies by July 31.
- If the release occurred between July 1 to December 31;  
Send the copies by January 31.

2. Keep the **WHITE** copy on site for no less than **5 years**.

#### **Halocarbon Releases – 10 kg (22 lb) or less**

1. According to the following schedule, send the **BLUE** copy to the Regional Office of Environmental Coordination, [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca)

- If the release occurred between January 1 – June 30;  
Send **BLUE** copy by July 31.
- If the release occurred between July 1 – December 31;  
Send **BLUE** copy by January 31.

2. Keep the **WHITE** copy on site for no less than 5 years

#### **NOTE:**

- Do not send *Halocarbon Release Reports* (the **PINK** copy) to Environment Canada for releases of 10 kg (22 lb) or less.
- Halocarbon releases must be reported using the *Halocarbon Release Report* form.

The **Halocarbon Release Report (Figure 8)** is a three-piece form (**WHITE, PINK, and BLUE** copy). These forms are to be completely filled out when a release of halocarbon has occurred, regardless of the type of equipment or the size of the release.

#### ***Instructions for Completing a Halocarbon Release Report***

Populate all fields of the release report form:

- **Reporting Periods:** There are two reporting periods Jan 1 - June 30 and July 1 - Dec 31
- **Site Name:** Facility name
- **Site Address:** Facility address
- **Equipment Owner:** Name of the person or department that owns the equipment
- **Facility Contact Name:** Name of the person who manages and maintains the equipment
- **Facility Contact Number:** Number of the operator
- **Release Number:** Number of halocarbon releases (form can report up to 3 releases in the same reporting period)
- **Date of Release:** Date the release occurred or was detected
- **Halocarbon Released:** Type of halocarbon contained in equipment (e.g. R134a)





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Disposal involves sending or taking the decommissioned system to a disposal facility.

The **Disposal or Decommissioning Notice** is a two part form (**WHITE** and **YELLOW**) that is to be completed for decommissioning (permanent or temporary) or disposal of halocarbon containing equipment.

Instructions for completing services notices are detailed below and **Figure 9** provides an example of a completed service notice.

### Instructions on Completing a Disposal or Decommissioning Notice

#### Step 1:

- Hire a certified technician to undertake required servicing or leak testing.
- Provide the Service Technician with a copy of the *Contractor Awareness Document* (attached)

#### Step 2:

**Fully** complete the two part Disposal or Decommissioning form:

- **Operator Name:** Name of operator of the decommissioned equipment
- **Contact Operator at:** Telephone number of the operator

#### Equipment Owner

- **Owner:** Name of the person or department who owns the equipment
- **Address of Owner:** Address of owner

#### Equipment Information

- **Serial Number:** Typically located on equipment nameplate
- **Type of System:** AC, refrigeration, fire extinguishing or solvent
- **Refrigerant Type and Quantity:** Type of halocarbon contained in equipment (e.g. R134a) and the amount contained (usually in kg)
- **Cooling Capacity:** In kW, BTU, HP, or RT
- **Location (prior to action):** Location of equipment before removal, as specific as possible
- **Final Destination of System:** Specific landfill or other disposal location

#### Technician Information

- **Technician Name:** Name of the certified technician decommissioning the equipment
- **Disposal Company:** Name of the company employing the certified technician
- **ODS Course Number:** Technician's certification number from Environmental Awareness in ODS course
- **Trade Qualification Certificate Number:** Certified technician's TQC number

#### Activity Type

- **Check one or more if applicable:**
  - **Disposal:** When disposing of a decommissioned system
  - **Decommissioning:** When decommissioning a system
  - **Temporary Decommissioning:** When decommissioning a system that will be reactivated at a later date

#### Refrigerant Recovered



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- **Date:** Date of halocarbon recovery
- **Yes/No:** Was halocarbon recovered?
- **Refrigerant Type:** Type of halocarbon recovered if applicable (e.g. R134a)
- **Amount:** Amount of halocarbon recovered if applicable
- **Comments:** Anything relevant to the decommissioning or disposal, such as anticipated reactivation date, or disposal date if different than recovery date

**Step 3:**

Affix **WHITE** copy of notice to equipment and retain **YELLOW** copy on site for no less than 5 years.

**Step 4:**

Update halocarbon inventory. Move information from In Use tab to Decommissioning or Disposal tab. (Note: In Use tab not available on some inventories)

**Step 5:**

Remove the DFO NL Halocarbon Inventory Tag from the equipment.

DISPOSAL OR DECOMMISSIONING NOTICE 0376

**DO NOT REMOVE THIS NOTICE FROM UNIT**

The information below must be recorded in the service log and the halocarbon inventory.

Operator Name: Joe Manning Contact operator at (709) 777-2134 for more information.

**ALL HALOCARBONS MUST BE REMOVED BEFORE DISPOSAL OR DECOMMISSIONING**

Equipment Owner		Equipment Information			Technician Information	
Name: <u>Jim O'Brian</u>		Serial Number <u>854G274</u>			Technician Name <u>Cyril Gosse</u>	
Address of Owner: <u>187 North Pond Road, Torbay, NL</u>		Type of System <u>R134a Air Conditioning</u>			Disposal Company <u>Van Isle Refrigeration</u>	
		Refrigerant Type & Quantity <u>R134a 15kg</u>			ODS Course # <u>48965</u>	
		Cooling Capacity (kW or tons) <u>9.2 tons</u>			Trade Qualification Certificate # <u>649802</u>	
		Location (prior to action) <u>17 Robin Hood Bay Road, St. John's</u>				
		Final Destination of System <u>196 Caribou Lane, Carboncar Slade's Recycling</u>				
Activity Type						
<input checked="" type="checkbox"/> Disposal <input checked="" type="checkbox"/> Decommissioning <input type="checkbox"/> Temporary Decommissioning						
	Date	Yes	No	Refrigerant Type	Amount (kg)	Comments
Refrigerant	<u>Feb 6, 2015</u>	/		<u>R134a</u>	<u>65kg</u>	<u>Removed from site same day for disposal at Slade's Recycling</u>
Recovered	<u>Feb 6, 2015</u>		/	<u>N/A</u>	<u>N/A</u>	

Part 1 / WHITE: Affix to equipment  
Part 2 / YELLOW: Retain with service log

**Figure 9: Example Disposal or Decommissioning Notice**

The documents and supplies are available from the Regional Office of Environmental Coordination.  
Contact: (709) 772-7045 or [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca)



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## 9.0 Summary of General Requirements and Prohibitions

<b>General Requirements</b>	
All halocarbon containing equipment is to be inventoried and tagged. Inventories are to be submitted to the ROEC by Jan 31 annually.	✓
Before they commence any work on a halocarbon-containing system, provide the Service Technician with a copy of the <i>Contractor Awareness Document</i> (attached). Only a certified person may perform any work on a system and work must be carried out according to the <i>Refrigerant Code of Practice</i> or <i>The Servicing of Halon Extinguishing Systems (ULC/ORD-C1058.18-1993)</i> .	✓
An entry into the service log (documentation journal) by the service technician is required whenever a system is installed, serviced, leak tested, charged or if any other work is done that may cause a halocarbon release.	✓
Service notices must be filled out completely and affixed to the system after a leak test, and/or before dismantling, decommissioning or destruction of the system.	✓
Notices affixed to the equipment cannot be removed. Keep notices on site for minimum five (5) years.	✓
Before dismantling, decommissioning, or destroying of a system, all of the halocarbon must be recovered and a decommissioning notice completed and affixed to the equipment.	✓
A leak test is required before charging any system.	✓
Leak tests must be done at least once every 12 months for equipment that has a cooling capacity equal to or over 19kW (5.4 RT) – LARGE systems and for fixed halon-containing fire extinguishing systems.	✓
Ownership validation forms must be completed for equipment that has a cooling capacity equal to or over 19kW (5.4 tons) – LARGE systems and for fixed halon-containing fire extinguishing systems. Completed forms are to be sent to Regional Office of Environmental Coordination. <a href="mailto:ROEC-Environmental-Management@df-mpo.gc.ca">ROEC-Environmental-Management@df-mpo.gc.ca</a>	✓
If a leak is found or a release occurs, you must stop the leak immediately and notify the owner. A release report is to be prepared.	✓
<b>General Prohibitions</b>	
Cannot release, allow or cause the release of a halocarbon.	X
Cannot install systems that use CFCs, Halon 1011, Halon 1211, Halon 1301, Halon 2402, other BFCs, HBFCs, carbon tetrachloride or methyl chloroform.	X



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Cannot charge a leaking system.	X
Cannot charge CFCs into a chiller that has undergone an overhaul. Effective Jan 1, 2015, cannot operate a chiller containing CFCs.	X
Cannot service a halocarbon containing fire-extinguishing system without notifying the owner of the intended service and affixing a notice on the control panel of the system to indicate that it is out of operation during the period of service.	X
Cannot charge a portable or fixed fire-extinguishing system with CFCs, Halon 1011, Halon 1211, Halon 1301, Halon 2402, other BFCs or HBFCs.	X

**10.0 Associated Training**

Halocarbon Management Training

Offered by: Regional Office of Environmental Coordination

Duration: Approximately 1 Hour

Recommended frequency: Once every 3 years

To arrange for training, contact the Regional Office of Environmental Coordination at (709) 772-7045 or [ROEC-Environmental-Management@dfo-mpo.gc.ca](mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca).

**11.0 Records**

The following records are to be maintained and readily available on-site.

Record	Retention
Halocarbon Inventory	Permanent
Service Notices	5 years
Documentation Journal	5 years
Disposal or Decommissioning Notices	5 years
Release Reports	5 years
Training Records	Permanent

All records shall be kept onsite for a minimum of **five (5)** years following date of issue or more as required (human health exposure records and training records are permanent).



# Halocarbon

## Acquisition

# Standard Operating Procedure 1



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• **Purpose**

The purpose of this procedure is to define the requirements for compliance with the *Federal Halocarbon Regulations* (FHR) related to the purchase of equipment containing halocarbons or the use of equipment containing halocarbons.

• **Scope**

This procedure applies to:

- All owners (see **Table 1**) and operators of halocarbon containing equipment on vessels or at facilities in the DFO and CCG Atlantic Region
- Employees of the Regional Office of Environmental Coordination (see **Appendix D: Table D3**).

**Regulatory Reference**

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004)*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*



• **Tasks / Responsibilities**

Tasks	Description	Responsibility
<b>Acquisition of Halocarbon Containing Equipment</b>	Whenever an air conditioning, fire extinguishing, refrigeration or solvent system is to be purchased always consider purchasing a system that uses refrigerants which have no Ozone Depleting Potential (ODP) and low Global Warming Potential (GWP). Consult with the ROEC for advice on acceptable / preferred products if required.	<b>Owner (purchaser of the equipment)</b>
<b>Purchasing of Halocarbons</b>	<p>Determine if the air conditioning, fire extinguishing, refrigeration or solvent system to be purchased for installation operates (or is intended to operate) with any of the following halocarbons:</p> <ul style="list-style-type: none"> <li>• Tetrachloromethane (carbon tetrachloride);</li> <li>• 1,1,1-trichloroethane (methyl chloroform), not including 1,1,2-trichloroethane;</li> <li>• Chlorofluorocarbons (CFC);</li> <li>• Bromochlorodifluoromethane (Halon 1211);</li> <li>• Bromotrifluoromethane (Halon 1301);</li> <li>• Dibromotetrafluoroethane (Halon 2402);</li> <li>• Bromofluorocarbons;</li> <li>• Bromochloromethane (Halon 1011);</li> <li>• Hydrobromofluorocarbons (HBFC)</li> </ul> <p>If yes, consider alternative options. If no technically or financially feasible alternative exists, advise the ROEC and prepare and submit an application for a permit from Environment and Climate Change Canada (Note permits will only be considered if no technically or financially feasible alternative is available. If the permit is issued, it is only valid for one year).</p>	<b>Owner (purchaser of equipment)</b>
<b>Inventory Tagging</b>	If equipment is purchased, ROEC to provide halocarbon inventory tag.	<b>ROEC</b>



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<b>Affix Inventory Tag and Report to ROEC</b>	Affix tag to equipment; update inventory and provide information to ROEC	<b>Owner</b>
<b>Solvent Systems</b>	Determine if Hydrofluorocarbons (HFC) or Perfluorocarbons (PFC) are used in any solvent systems on site.  If yes, notify the ROEC to ensure a permit is requested and received from Environment and Climate Change Canada <b>OR</b> ensure that the gas (or the system) is replaced by qualified technicians and in conformity with procedures in the Refrigerant Code of Practice. Maintain appropriate records of this activity for 5 Years.	<b>Owner</b>
<b>Storage of Halocarbons</b>	If halocarbons are being stored on site, transported to the site or purchased for use (except those used as laboratory analytical standards or laboratory reagents), ensure that the halocarbon is in a container designed and manufactured to be refilled and contain that specific type of halocarbon. Consult with the ROEC for advice on appropriate containers.	<b>Owner</b>
<b>Training</b>	Provide regulatory advice on the requirements of the Federal Halocarbon Regulations.	<b>ROEC</b>

**Table 1: Owner/Operator at a Facility/Vessel**

<b>Type of Facility</b>	<b>Owner</b>	<b>Operator</b>
<b>CCG Atlantic Vessels</b>	CCG Atlantic Vessel Captain	<b>CCG Atlantic Staff (On Vessel)</b>
<b>Search and Rescue Stations (SAR), Marine Communications and Transportation Services Centers (MCTS), Bases</b>	Building Custodian	<b>CCG Atlantic Staff (On Site)</b>
<b>Biodiversity Facilities &amp; Rearing Stations</b>	Building Custodian	<b>DFO Branch/Sector Staff (On Site)</b>
<b>C&amp;P Offices – leased</b>	1) DFO staff if the halocarbon containing equipment is OWNED by DFO (e.g. refrigerators, freezers, air conditioners).  2) If the equipment is owned by the building	1) <b>DFO Branch/Sector Staff (On Site)</b>  2) <b>Owner (Non</b>



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<b>spaces</b>	owner, and DFO staff is not involved in control, maintenance, operation, management or disposal of the halocarbon containing equipment, then DFO has no responsibilities for the halocarbon containing equipment.	<b>DFO)</b>
<b>DFO Programs and Administration – leased spaces</b>	<ol style="list-style-type: none"> <li>1) DFO Staff if the halocarbon containing equipment is OWNED by DFO (e.g. refrigerators, freezers, air conditioners).</li> <li>2) If the equipment is owned by the building owner, and DFO staff are not involved in control, maintenance, operation, management or disposal of the halocarbon containing equipment, then DFO has no responsibilities for the halocarbon containing equipment</li> </ol>	<ol style="list-style-type: none"> <li>1) <b>DFO Branch/Sector Staff (On Site)</b></li> <li>2) <b>Owner (Non DFO)</b></li> </ol>
<b>Small Craft Harbour Sites</b>	Building Custodian/SCH Staff who are on site. Harbour Authorities if in Lease Agreement.	<b>Building Custodian/SCH Staff</b>
<b>DFO Buildings managed by PWGSC</b>	<ol style="list-style-type: none"> <li>1) Public Works &amp; Government Services Canada (PWGSC Facility Manager) (for equipment contracted by DFO to maintain or equipment owned by them)</li> <li>2) Halocarbon containing equipment purchased by and/or maintained by a specific program staff is the responsibility of that program staff.</li> </ol>	<ol style="list-style-type: none"> <li>1) <b>PWGSC</b></li> <li>2) <b>DFO Staff</b></li> </ol>
<b>Buildings where DFO leases space to tenants</b>	Tenant representative as defined in Legal Documents (i.e. Lease Agreements). However, DFO, as the building owner, has a responsibility to ensure that the Tenants are meeting the requirements of the Federal Halocarbon Regulations.	<b>Dependent on Lease Agreement</b>



# Halocarbon

## Management of Inventory

### Standard Operating Procedure 2



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**Purpose**

The purpose of this procedure is to define the requirements for maintenance and management (including updating) of the Halocarbon Inventory.

**• Scope**

This procedure applies to:

- All owners and operators of halocarbon containing equipment on vessels or at facilities in the DFO and CCG Atlantic Region
- Employees of the Regional Office of Environmental Coordination (ROEC).

**Regulatory Reference**

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004)*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*

**Tasks / Responsibilities**

Task	Description	Responsibility
<b>Ownership</b>	Complete the Halocarbon Ownership Validation Form for halocarbon containing equipment (See <b>Form #1</b> attached).	<b>Owner</b>
	When halocarbons or halocarbon equipment is acquired, notify the ROEC and provide the following information: <ul style="list-style-type: none"> <li>▪ Owner name, address and contact</li> </ul>	



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<p><b>ROEC Inventory Information</b></p>	<p>information</p> <ul style="list-style-type: none"> <li>▪ Type of halocarbon-containing equipment, manufacturer, model number and serial number</li> <li>▪ Capacity of the halocarbon-containing equipment (including amps and volts)</li> <li>▪ Type of halocarbon</li> <li>▪ Amount of halocarbon</li> <li>▪ Location of the halocarbon-containing equipment (e.g. building, floor and room number, if possible).</li> </ul>	<p><b>Owner</b></p>
<p><b>Inventory Tagging</b></p>	<p>Issue a specifically numbered tag to be affixed to the new equipment.</p>	<p><b>ROEC</b></p>
<p><b>Affix Inventory Tag to Equipment</b></p>	<p>Securely affix the tag to the equipment. For mobile (moveable) equipment (e.g. refrigerators, freezers) ensure the Inventory Tag is in an easily accessible location. Notify ROEC that this has been completed by sending the updated facility specific inventory (see <b>Form # 2</b> attached) with new tag information.</p>	<p><b>Owner</b></p>
<p><b>Update Regional Inventory</b></p>	<p>Update the Regional Halocarbon Inventory with the Tag Number and the specific information provided by the Owner in the facility specific inventory.</p>	<p><b>ROEC</b></p>
<p><b>Movement of Equipment</b></p>	<p>When halocarbon-containing equipment is to be moved, update the facility inventory, provide the latest inventory to the ROEC so that they are aware of the new location</p>	<p><b>Owner</b></p>
<p><b>ROEC Inventory Notification of Relocation</b></p>	<p>Update the Regional Halocarbon Inventory with information provided by Owner whenever equipment is moved</p>	<p><b>ROEC</b></p>



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<b>Decommissioning, dismantling or disposal</b>	When halocarbon-containing equipment is to be decommissioned, dismantled or disposed of, remove the tag and return to the ROEC ( Note: Do <b>not</b> save the tag and place on another piece of equipment if the equipment has been replaced with something new). Update the facility specific inventory and forward to ROEC (see Halocarbon SOP 3)	<b>Owner</b>
<b>ROEC Inventory- Notification of decommissioning, dismantling, and disposal</b>	Update the Regional Halocarbon Inventory whenever halocarbon-containing equipment is decommissioned, dismantled or disposed of; dispose of the tag which was returned by the Owner	<b>ROEC</b>
<b>Addition, or Removal of a Halocarbon</b>	When halocarbons are added to or removed from an unoccupied premises, or an unoccupied site, update the inventory within 30 days and forward changes to ROEC.	<b>Owner</b>
<b>Divestiture/Acquisition of property containing halocarbons</b>	When any unoccupied premise or unoccupied site where halocarbons are found is divested, or when such premises or sites are acquired, update the inventory and forward changes to ROEC.	<b>Owner</b>
<b>Unoccupied Site Inventory - OEC</b>	Forward updated inventory information for unoccupied premises or sites to OEC HQ as soon as information is received from the owners. (See <b>Form 2</b> attached)	<b>ROEC</b>
<b>Unoccupied Site Inventory – Annual Review</b>	Review regional Master List of unoccupied sites with halocarbons annually and update as required.	<b>ROEC</b>



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**Form #1 - HALOCARBON OWNERSHIP VALIDATION FORM**

In support of the National Halocarbon EMP, this form establishes roles and responsibilities regarding the management of halocarbons and halocarbon-containing systems in the Maritimes, Gulf and NL Regions

All custodians mentioned on this form are considered owners under the *FHR, 2003* and as such have responsibilities for the care and maintenance of this equipment

Under the *FHR, 2003*, "owner" means to hold a right in or to have possession, control or custody of, to be responsible for the maintenance, operation or management of, or to have the power to dispose of a system.

Date of Validation:	
Site Name:	
Region:	
Address:	
DFO Real Property Site Category (1 to 7):	
Site Owner:	
Custodians on Site:	
Who would attend EC inspections?	
Who is responsible for disposal?	
Who is responsible for the management of the equipment?	
Who has control of daily operations of the equipment?	
Who purchased the equipment?	
What program does it serve?	

Please write your name and sign below to validate that the information is correct and reflects the present inventory of halocarbon-containing equipment at the site.

Owner and/or Responsible for Equipment:	Date:
_____	_____
Name _____ Signature _____	
Title _____	

**Large Halocarbon-Containing Systems Inventory**

Description of System	
Cooling Capacity	
Size of System	
ROEC Inventory #	
Make	
Model	
Serial Number	
Type of Halocarbon	
Quantity of Halocarbon	
Location	





# Halocarbon

## Installation/ Servicing/ Disposal

### Standard Operating Procedure 3



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### ***Purpose***

The purpose of this procedure is to define the requirements for installation, maintenance, servicing, recharging, decommissioning, dismantling, destruction and disposal of halocarbon-containing equipment and ensure compliance with the Federal Halocarbon Regulations

### **• *Scope***

This procedure applies to:

- All owners and operators of halocarbon containing equipment on vessels and at facilities in the DFO and CCG Atlantic Region
- Employees of the Regional Office of Environmental Coordination (ROEC).

### ***Regulatory Reference***

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004)*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*

### ***General***

At present within the DFO (NL, Maritime and Gulf) Regions, and CCG Atlantic Region, there are two Halocarbon Documentation Log Books being used for halocarbon management. (i.e. Halocarbon Service Log Book and Halocarbon Reporting Journal **Appendix D: Figure D1 and Figure D2 respectively**)

The DFO Regions and CCG Atlantic Region will be discontinuing the use of the Halocarbon Service Log Book and will transition to the use of the Halocarbon Reporting Journal as its sole Halocarbon Documentation Log Book on a “site by site” or “vessel by vessel” basis.

During the transition phase, both log books will be acceptable to record halocarbon information required



by the *Canadian Environmental Protection Act - Federal Halocarbon Regulations.*

**Tasks / Responsibilities**

<b>Task</b>	<b>Description</b>	<b>Responsibility</b>
<b>Contractor Certification</b>	<p>Whenever the following types of work are done on a refrigeration system, or an air-conditioning system, always ensure the work is done by a “certified person” (i.e. a service technician who holds a certificate indicating successful completion of an environmental awareness course in recycling, recovery and handling procedures for halocarbon refrigerants as outlined in the Refrigerant Code of Practice): Install</p> <ul style="list-style-type: none"> <li>• service</li> <li>• leak test</li> <li>• charge</li> <li>• dismantle, decommission or destroy</li> <li>• do any other work on the system that may result in the release of a halocarbon</li> </ul>	<b>Owner</b>
<b>Recovery of Halocarbons</b>	<p>Ensure that that whenever a certified person does any work on a refrigeration system, an air-conditioning system or a fire-extinguishing system that may result in the release of a halocarbon, that the halocarbon is recovered into a container designed and manufactured to be refilled and to contain that specific type of halocarbon.</p>	<b>Owner</b>
<b>Halocarbon Service Log Book or Halocarbon Reporting Journal</b>	<p>Provide each facility where there is halocarbon-containing equipment a Service Log Book (blue book entitled <i>Federal Halocarbon Legislative Requirements – Log Book – see Appendix D: Figure D1 and Table D1</i>) or a Halocarbon Reporting Journal (see <i>Appendix D: Figure D2 and Table D2</i>).</p>	<b>ROEC</b>
	<p>Whenever service is conducted on a refrigeration or</p>	<b>Owner</b>



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<p><b>Halocarbon Service Log Book or Halocarbon Reporting Journal Information to be recorded</b></p>	<p>air conditioning system, ensure that the certified technician completes the Service Log Book or the Halocarbon Reporting Journal. The following information is to be recorded:</p> <ul style="list-style-type: none"> <li>• name and address of owner of system</li> <li>• name of operator of system</li> <li>• specific location of system</li> <li>• description of system</li> <li>• name of certified person</li> <li>• certificate number</li> <li>• name of employer of certified person (if applicable)</li> <li>• dated list of leak tests, leaks detected and leak repairs</li> <li>• type and quantity of halocarbon and date recovered</li> <li>• charging capacity of system</li> <li>• signature</li> </ul>	<p><b>Owner</b></p>
<p><b>Document Retention</b></p>	<p>Maintain service log information at the site for minimum of 5 years.</p>	<p><b>Owner</b></p>
<p><b>Releases while undertaking work</b></p>	<p>Ensure that the work undertaken on refrigeration or air conditioning equipment does not result in the release of a halocarbon unless the release results from a purge system that emits less than 0.1 kg of halocarbon per 1 kg of air purged to the environment.</p>	<p><b>Owner</b></p>
<p><b>Leak Testing before charging Halocarbon Containing Equipment</b></p>	<p>Ensure that before a refrigeration or air conditioning system is charged, the system is leak tested and found not to be leaking. (Refer to <b>Appendix D: Figure D3</b> – Service Notice Form)</p> <p>If a leak is detected the certified person must notify the owner immediately and is responsible for ensuring that the leak is repaired. If a leak is found, refer to Halocarbon SOP 4.</p>	<p><b>Owner</b></p>



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<p><b>Prohibited Substances for Recharging</b></p>	<p>Ensure that refrigeration and air conditioning systems and chillers are not charged with any of the following halocarbons:</p> <ul style="list-style-type: none"> <li>• Tetrachloromethane (carbon tetrachloride);</li> <li>• 1,1,1-trichloroethane (methyl chloroform), not including 1,1,2-trichloroethane;</li> <li>• Chlorofluorocarbons (CFC);</li> <li>• Bromochlorodifluoromethane (Halon 1211);</li> <li>• Bromotrifluoromethane (Halon 1301);</li> <li>• Dibromotetrafluoroethane (Halon 2402);</li> <li>• Bromofluorocarbons;</li> <li>• Bromochloromethane (Halon 1011);</li> <li>• Hydrobromofluorocarbons (HBFC)</li> </ul>	<p><b>Owner</b></p>
<p><b>Recovery prior to dismantling, destroying or decommissioning</b></p>	<p>If equipment is to be dismantled, decommissioned or destroyed, ensure that all halocarbons are recovered into a container designed and manufactured to be refilled and to contain that specific type of halocarbon.</p>	<p><b>Owner</b></p>
<p><b>Portable Fire Extinguisher recharging</b></p>	<p>No person shall charge a portable fire extinguisher with a halocarbon identified in Schedule 1 (#1 - #9) unless:</p> <ol style="list-style-type: none"> <li>a. Issued a permit under the FHR 2003;</li> <li>b. For a fire-extinguisher on board an aircraft.</li> </ol>	<p><b>Owner</b></p>
<p><b>Affixing Notices to</b></p>	<p>If equipment is to be dismantled, decommissioned or</p>	<p><b>Owner</b></p>



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<p><b>Equipment for dismantle, decommissioning or destruction of a halocarbon containing equipment</b></p>	<p>destroyed, ensure that a leak test notice is affixed to the system which must contain the following information:</p> <ul style="list-style-type: none"> <li>• name and address of owner of system</li> <li>• name of operator of system</li> <li>• specific location of system before its dismantling, decommissioning or destruction</li> <li>• description of system</li> <li>• name of service technician who recovered halocarbons</li> <li>• certificate number of service technician (if applicable)</li> <li>• name of employer of service technician (if applicable)</li> <li>• type and quantity of halocarbon and date recovered</li> <li>• type and charging capacity of system</li> <li>• final destination of system</li> </ul> <p><b>Appendix D: Figure D4</b> – Example of Disposal or Decommission Notice</p>	
<p><b>Records Retention for a minimum of 5 Years</b></p>	<p>If equipment is to be dismantled, decommissioned or destroyed, maintain a copy of this record on site for minimum of 5 years.</p>	<p><b>Owner</b></p>
<p><b>Return of Halocarbon Inventory Tags</b></p>	<p>If equipment is to be dismantled, decommissioned or destroyed remove inventory tags and return to ROEC. Update the site specific inventory to remove this piece of equipment and forward to ROEC.</p>	<p><b>Owner</b></p>
<p><b>Regional Inventory Updates</b></p>	<p>Update regional inventory.</p>	<p><b>ROEC</b></p>
<p><b>FHR Training</b></p>	<p>Provide regulatory advice on the requirements of the Federal Halocarbon Regulations.</p>	<p><b>ROEC</b></p>



# Halocarbon

## Leak Testing of Halocarbon Containing Equipment

### Standard Operating Procedure 4



**Purpose**

The purpose of this procedure is to define the requirements for leak testing of halocarbon-containing equipment and ensure compliance with the Federal Halocarbon Regulations

**Scope**

This procedure applies to:

- All owners and operators of halocarbon containing equipment on vessels and at facilities in the DFO and CCG Atlantic Region
- Employees of the Regional Office of Environmental Coordination (ROEC).

**Regulatory Reference**

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004)*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*

**Tasks / Responsibilities**

Task	Description	Responsibility
<b>Leak Testing Requirements</b>	Ensure that refrigeration systems and air conditioning systems that equal or exceed 19kW capacity are leak tested (by a certified person) every 12 months.	<b>Owner</b>
	Ensure that the information on the leak test is	<b>Owner</b>



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<p><b>Affixed Leak Testing Notices of Service</b></p>	<p>recorded in the Halocarbon Log Book (<b>Appendix D: Figure D1</b>) or the Halocarbon Reporting Journal (<b>Appendix D: Figure D2</b>) and also affixed to the system and includes:</p> <ul style="list-style-type: none"> <li>• name and address of owner of system</li> <li>• name of operator of system</li> <li>• specific location of system</li> <li>• description of system</li> <li>• name of certified person</li> <li>• certificate number</li> <li>• name of employer of certified person (if applicable)</li> <li>• type of halocarbon contained in system</li> <li>• charging capacity of system</li> <li>• date of last two leak tests performed on system</li> </ul>	<p><b>Owner</b></p>
<p><b>Standard Leak Test Notice</b></p>	<p>Provide standard Refrigerant Service Record Notices to facility. A sample Service Notice Form is included as <b>Appendix D: Figure D3</b>.</p>	<p><b>ROEC</b></p>
<p><b>Removal of Leak Test Notices of Service</b></p>	<p>Ensure that a leak test notice is not removed from a piece of equipment for a minimum of five (5) years.</p>	<p><b>Owner</b></p>
<p><b>Records Retention – Leak Test Notices of Service</b></p>	<p>Maintain Leak test information at the site for five years.</p>	<p><b>Owner</b></p>
<p><b>Prohibited Substances</b></p>	<p>Ensure that the following halocarbons are not charged</p>	<p><b>Owner</b></p>



<p><b>for Leak Testing</b></p>	<p>to an air conditioning or refrigeration system for the purpose of leak testing:</p> <ul style="list-style-type: none"> <li>• Tetrachloromethane (carbon tetrachloride);</li> <li>• 1,1,1-trichloroethane (methyl chloroform), not including 1,1,2-trichloroethane;</li> <li>• Chlorofluorocarbons (CFC);</li> <li>• Bromochlorodifluoromethane (Halon 1211);</li> <li>• Bromotrifluoromethane (Halon 1301);</li> <li>• Dibromotetrafluoroethane (Halon 2402);</li> <li>• Bromofluorocarbons;</li> <li>• Bromochloromethane (Halon 1011);</li> <li>• Hydrobromofluorocarbons (HBFC)</li> </ul>	<p><b>Owner</b></p>
<p><b>Exceptions to Repair of System Leaks (Immediate Danger to Human Life or Health)</b></p>	<p>Where a leak is discovered prior to charging an air conditioning or refrigeration system, ensure that the leak is repaired before charging the system. (Note: if it is necessary to charge the leaking system to prevent an immediate danger to human life or health, the leak does not have to be repaired while the danger persists – up to a maximum of 7 days)</p>	<p><b>Owner</b></p>
<p><b>Repair after detection of a refrigeration or Air Conditioning Leak</b></p>	<p>Ensure that, as soon as possible after the detection of a leak (and definitely within 7 days) from a refrigeration or an air conditioning system, that the leak is repaired; that the leaking portion of the system is isolated and the halocarbon recovered; OR the halocarbon is recovered from the system.</p>	<p><b>Owner</b></p>
<p><b>FHR Training</b></p>	<p>Provide regulatory advice on the requirements of the Federal Halocarbon Regulations.</p>	<p><b>ROEC</b></p>



# Halocarbon

## Reporting of Halocarbon Releases

### Standard Operating Procedure 5



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• **Purpose**

The purpose of this procedure is to define the requirements for reporting releases of halocarbons to ensure compliance with the Federal Halocarbon Regulations.

**Scope**

This procedure applies to:

- All owners and operators of halocarbon containing equipment on vessels and at facilities in the DFO and CCG Atlantic Region.
- Employees of the Regional Office of Environmental Coordination (ROEC).

**Regulatory Reference**

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*

**Tasks / Responsibilities**

Task	Description	Responsibility
<b>Release of Halocarbons (&gt;100Kgs)</b>	<p>If there is a <u>release of 100 kg of halocarbons (or more), immediately (and definitely within 24 hours)</u> advise the ROEC and provide the following information:</p> <ul style="list-style-type: none"> <li>• name of the owner</li> <li>• the type and quantity of halocarbon released</li> <li>• the type of system, container or equipment</li> </ul>	<b>Owner</b>



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	from which it was released	
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<u><b>Within 24 hours</b></u>	<p><b>Within 24 hours</b> of the release of 100 kg or more make a report to Environment and Climate Change Canada (see contact information below) and provide the following information:</p> <ul style="list-style-type: none"> <li>• name of the owner;</li> <li>• the type and quantity of halocarbon released;</li> <li>• the type of system, container or equipment from which it was released.</li> </ul> <p>A sample Release Report is included as <b>Appendix D: Figure D5</b>.</p> <p><b>Emergency Number (verbal reporting):</b>  Maritimes Provinces:  1-800-565-1633  902-426-6030</p> <p>Newfoundland and Labrador:  1-800-563-9089  709-772-2083</p> <p><b>Mailing Address (written reporting):</b>  Regional Director  Environmental Enforcement Division  Environment and Climate Change Canada  16<sup>th</sup> floor, Queen Square  45 Alderney Drive  Dartmouth NS B2Y 2N6  Fax: 902-426-7924  E-mail: <a href="mailto:fhr2003@ec.gc.ca">fhr2003@ec.gc.ca</a></p>	<b>Owner</b>
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<p><b><u>Within 14 days</u></b></p>	<p><b>Within 14 days</b> of the release of 100 kg or more of a halocarbon, prepare and submit (to address above) a written report with the following information:</p> <ul style="list-style-type: none"> <li>• name and address of owner of system</li> <li>• type and quantity of halocarbon released</li> <li>• date of release</li> <li>• type and description of system</li> <li>• circumstances leading to the release, corrective action and actions to prevent subsequent releases</li> </ul>	<p><b>Owner</b></p>
<p><b>Repair of Release (&gt;100kgs)</b></p>	<p>If there is a release of 100 kg (or more) of halocarbon ensure that the leak is repaired as soon as possible and definitely within 7 days; that the leaking portion of the system is isolated and the halocarbon recovered from that portion; or that the halocarbon is recovered from the system.</p>	<p><b>Owner</b></p>
<p><b>Repair of Leak Between (&gt;10kgs&lt;100kgs)</b></p>	<p>If there is a release of more than 10 kg (but less than 100 kg) of halocarbons ensure that the leak is repaired as soon as possible and definitely within 7 days; that the leaking portion of the system is isolated and the halocarbon recovered from that portion; or that the halocarbon is recovered from the system.</p>	<p><b>Owner</b></p>
<p><b>Record Requirements for Releases (&gt;10Kgs&lt;100kgs)</b></p>	<p>If there is a release of more than 10 kg (but less than 100 kg) of halocarbons ensure that the <u>information is recorded in the Service Log Book or Halocarbon Reporting Journal.</u></p>	<p><b>Owner</b></p>
<p><b>Report a Release to ROEC (&gt;10kgs&lt;100kgs)</b></p>	<p>If there is a release of greater than 10 kgs and less than 100 kgs of halocarbons, advise the ROEC within 5 days.</p>	<p><b>Owner</b></p>
<p><b>Environment and Climate Change Canada - Bi-Annual Halocarbon Release Reporting</b></p>	<p>A report must be submitted to Environment and Climate Change Canada twice a year (bi-annually) not later than 30 days after January 1 and July 1 each year on releases &gt;10kgs&lt;100 kgs at the address below with the following information:</p> <ul style="list-style-type: none"> <li>• name and address of owner of system;</li> </ul>	<p><b>ROEC</b></p>



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	<ul style="list-style-type: none"> <li>• type and quantity of halocarbon released;</li> <li>• date of release;</li> <li>• type and description of system;</li> <li>• circumstances leading to the release, and;</li> <li>• corrective action(s) taken to prevent subsequent releases.</li> </ul> <p><b><u>Mailing Address for Bi-Annual Reporting</u></b> Regional Director Environmental Enforcement Division Environment and Climate Change Canada 16<sup>th</sup> floor, Queen Square 45 Alderney Drive Dartmouth NS B2Y 2N6</p>	
<b>Repair of Leaks (&lt;10Kgs)</b>	<p>If there is a release of &lt;10 kgs of a halocarbon:</p> <ul style="list-style-type: none"> <li>• ensure that the leak is repaired as soon as possible and definitely within 7 days;</li> <li>• that the leaking portion of the system is isolated, and;</li> <li>• the halocarbon recovered from that portion; or the halocarbon is recovered from the system.</li> </ul>	<b>Owner</b>
<b>Records Management for Leaks (&lt;10Kgs)</b>	<p>If there is a release of &lt;10 kgs of a halocarbon ensure that the information is recorded in the Service Log Book or Halocarbon Reporting Journal.</p>	<b>Owner</b>
<b>ROEC Notification of Release (&lt;10Kgs)</b>	<p>If there is a release of less than 10 kgs of a halocarbon, advise the ROEC within 5 days.</p>	<b>Owner</b>
<b>Document Retention - Releases</b>	<p>Maintain a copy of all release reports on site for <u>5</u> years.</p>	<b>Owner</b>



# Halocarbon

## Emergency Response to Halocarbon Releases

### Standard Operating Procedure 6



• **Purpose**

The purpose of this procedure is to define the requirements for responding to releases of halocarbons to ensure compliance with the Federal Halocarbon Regulations.

• **Scope**

This procedure applies to:

- All owners and operators of halocarbon containing equipment on vessels and at facilities in the DFO and CCG Atlantic Region.
- Employees of the Regional Office of Environmental Coordination (ROEC).

**Regulatory Reference**

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004)*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*

**General**

At present within the DFO (NL, Maritime and Gulf) Regions, and CCG Atlantic Region, there are two Halocarbon Documentation Log Books being used for halocarbon management; Halocarbon Service Log Book (**Appendix D: Figure D1**) and Halocarbon Reporting Journal (**Appendix D: Figure D2**). The DFO Regions and CCG Atlantic Region will be discontinuing the use of the Halocarbon Service Log Book and will transition to the use of the Halocarbon Reporting Journal as its sole Halocarbon Documentation Log Book on a “site by site” or “vessel by vessel” basis. During the transition phase, both log books will be acceptable to record halocarbon information required by the *Canadian Environmental Protection Act - Federal Halocarbon Regulations*.



• **Tasks / Responsibilities**

<b>Task</b>	<b>Description</b>	<b>Responsibility</b>
<b>Evacuation</b>	When a release is discovered, particularly from equipment in an enclosed space or inside, evacuate everyone from the immediate area or the entire building, if necessary.	<b>Person who discovers the leak</b>
<b>Contact Owner</b>	Contact the Owner (see <b>Table 1</b> for definitions of Owner in different facilities) and advise that there has been a release of halocarbons and identify the equipment which is leaking.	<b>Person who discovers the leak</b>
<b>Determine if Fire Department is Required</b>	Determine if the Fire Department should be contacted (based on the equipment which is leaking and the amount of gas likely to be released).  Note: Small quantities of halocarbons released from refrigerators, window mount air conditioners or small freezers do not pose an emergency response/evacuation concern and <u>a call to the Fire Department is not necessary</u> .	<b>Owner</b>
<b>Provide Fire Department with a Copy of SDS</b>	If the Fire Department is called provide them with a copy of the Safety Data Sheet (SDS) for the released product.	<b>Owner</b>
<b>Get Fire Department Approval before re-entering the Facility</b>	Wait until the Fire Department has advised that the hazard has been eliminated and allow staff to re-enter the building	<b>Owner</b>
<b>Prepare Halocarbon Release Report</b>	Prepare a Halocarbon Release Report ( <b>Appendix D: Figure D5</b> ) in conjunction with the person who discovered the leak and provide report to the ROEC.	<b>Owner</b>
<b>Determine if Immediate EC Report is required</b>	Determine (in consultation with ROEC) whether an immediate report to Environment and Climate Change Canada (ECCC) is required (see Halocarbon SOP 5.0)	<b>Owner/Operator</b>
<b>Prepare Report</b>	Ensure appropriate reporting is completed (see Halocarbon SOP 5.0)	<b>ROEC</b>



<b>Equipment Recharging</b>	If the equipment needs to be recharged, hire a certified person to conduct the work and ensure the Halocarbon Service Log Book, ( <b>Appendix D: Table D1 and Figure D1</b> ), or the Halocarbon Reporting Journal ( <b>Appendix D: Table D2 and Figure D2</b> ) is completed appropriately. <b>Equipment must be repaired and leak tested before recharging.</b> Maintain appropriate records of this activity	<b>Owner</b>
<b>Equipment Disposal</b>	If the equipment needs to be disposed of ensure that a Disposal or Decommissioning notice is completed and affixed to the equipment being decommissioned ( <b>Appendix D: Figure D4</b> ); remove the Tag and advise the ROEC for inventory updating.	<b>Owner</b>

**Table 1: Definition of "Owner or Operator" at a Facility"**

<b>Type of Facility</b>	<b>Owner Definition</b>	<b>Operator Definition</b>
<b>CCG Atlantic Vessels</b>	CCG Atlantic Vessel Captain	<b>CCG Atlantic Staff on vessel</b>
<b>Search and Rescue Stations (SAR), Marine Communication and Traffic Services (MCTS) Centers, Bases</b>	Building Custodian	<b>CCG Staff who are on site</b>
<b>Biodiversity Facilities / Rearing Stations</b>	Building Custodian	<b>CCG Staff who are on site</b>
<b>C&amp;P Offices – leased spaces</b>	3) DFO Staff if the halocarbon containing equipment is OWNED by DFO (e.g. refrigerators, freezers, air conditioners).  4) If the equipment is owned by the building owner, and DFO staff are not involved in control, maintenance, operation, management or disposal of the halocarbon containing equipment, then DFO has no responsibilities	<b>3) DFO Staff</b>  <b>4) Owner (Non-DFO)</b>



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	for the halocarbon containing equipment.	
<b>DFO Programs and Administration (Leased Spaces)</b>	<ol style="list-style-type: none"> <li>3) DFO Staff if the halocarbon containing equipment is OWNED by DFO (e.g. refrigerators, freezers, air conditioners).</li> <li>4) If the equipment is owned by the building owner, and DFO staff are not involved in control, maintenance, operation, management or disposal of the halocarbon containing equipment, then DFO has no responsibilities for the halocarbon containing equipment.</li> </ol>	<ol style="list-style-type: none"> <li>1) <b>DFO Staff</b></li> <li>2) <b>Owner (Non-DFO)</b></li> </ol>
<b>Small Craft Harbour Sites</b>	Building Custodian/SCH Staff who are on site	<b>Harbour Authorities</b>
<b>DFO Buildings managed by PWGSC</b>	<ol style="list-style-type: none"> <li>1) Public Works &amp; Government Services Canada (PWGSC) Facility Manager (for equipment contracted by DFO to maintain or equipment owned by them).</li> <li>2) Halocarbon containing equipment purchased by and/or maintained by a specific program staff is the responsibility of that program staff.</li> </ol>	<ol style="list-style-type: none"> <li>1) <b>PWGSC</b></li> <li>2) <b>DFO Sector Responsibility</b></li> </ol>
<b>Buildings where DFO leases space to tenants</b>	Tenant Representative as defined in Legal Documents (i.e. Lease Agreements). (However, DFO, as the building owner, has a responsibility to ensure that the Tenants are meeting the requirements of the Federal Halocarbon Regulations).	<b>DFO unless specified in Lease Agreement</b>



# Halocarbon

## Document Control

# Standard Operating Procedure 7

	Fisheries and Oceans Canada	Pêches et Océans Canada	NL Region Environmental Management System for Operations and Assets
Title: <b>Halocarbon Procedure/ Overview and SOPs</b> Version: 3.0 Intellex Document #: 13131			Effective Date: 29 <sup>th</sup> November 2016 Date of Latest Revision: 23 <sup>rd</sup> April 2018

**Purpose**

This SOP provides guidance to personnel who may be required to complete, maintain or file documents relating to the management of halocarbons in equipment located on vessels or at land based facilities to ensure regulatory compliance with the Federal Halocarbon Regulations 2003 (FHR). The documentation is also required to meet internal Departmental requirements and will be reviewed during internal audits.

**Scope**

This procedure applies to:

- All owners and operators of halocarbon containing equipment located on vessels or at facilities in the DFO and CCG Atlantic Region.
- Employees of the Regional Office of Environmental Coordination (ROEC).

**Regulator Reference**

- *Canadian Environmental Protection Act, 1999*
- *Federal Halocarbon Regulations (SOR/2003-289)*
- *Ozone-depleting Substances Regulations (SOR/99-7)*
- *National Fire Code of Canada 2010*
- *The Servicing of Halon and Clean Agent Extinguishing Systems (ULC/ORD-C1058.18-2004)*
- *Halon and Halocarbon Clean Agent Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-2004)*
- *Newfoundland and Labrador Halocarbon Regulations (NLR 41/05)*
- *Prince Edward Island Ozone Layer Protection Regulations (EC619/94)*
- *Nova Scotia Ozone Layer Protection Regulations (NS Reg. 54/95 OC 95-293)*
- *New Brunswick Ozone Depleting Substances and Other Halocarbon Regulation (NB Reg. 97-132)*

**General**

At present within the DFO (NL, Maritimes and Gulf) Regions, and CCG Atlantic Region, there are two Halocarbon Documentation Books being used for Halocarbon Management; Halocarbon Reporting Journal (**Appendix D: Figure D1**) and Halocarbon Service Log Book (**Appendix D: Figure D2**). DFO Regions and CCG Atlantic Region will be discontinuing the use of the Halocarbon Service Log Book and will transition to the use of the Halocarbon Reporting Journal as its sole Halocarbon Documentation Log Book on a “site by site” or “vessel by vessel” basis. During the transition phase, both log books will be acceptable to record halocarbon information required by the *Canadian Environmental Protection Act - Federal Halocarbon Regulations*.

**Tasks / Responsibilities**

Task	Description	Responsibility
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<p><b>Halocarbon Reporting Journal or Halocarbon Service Log Book</b></p>	<p>A <b>Halocarbon Reporting Journal (Appendix D: Table D2 and Figure D2)</b> or <b>Halocarbon Service Log Book (Appendix D: Table D1 and Figure D1)</b> must be maintained for all systems or equipment containing halocarbons.</p> <p>The <b>Halocarbon Reporting Journal</b> or <b>Halocarbon Service Log Book</b> must be updated whenever work is completed on the system including, installation, charging, leak testing, servicing and decommissioning.</p>	<p><b>Owner or Operator</b></p>
<p><b>Halocarbon Reporting Journal</b></p>	<p>The following information is required in the <b>Halocarbon Reporting Journal:</b></p> <ul style="list-style-type: none"> <li>• Name and Address of owner of the system;</li> <li>• Name of Operator of the system;</li> <li>• Specific location of the system;</li> <li>• Description of the system;</li> <li>• Name of the certified person;</li> <li>• Certificate number;</li> <li>• Name of employer of the certified person (if applicable);</li> <li>• Dated list of leak tests, leaks detected and leak repairs;</li> <li>• Type and quantity of halocarbon and date recovered;</li> <li>• Charging capacity of the system.</li> </ul>	<p><b>Owner or Operator</b></p>
<p><b>Halocarbon Service Log Book</b></p>	<ul style="list-style-type: none"> <li>• Name of the certified person;</li> <li>• Certificate number;</li> <li>• Name of employer of the certified person (if applicable);</li> <li>• Description, Location of system and inventory</li> <li>• Dated list of leak tests, leaks detected and leak repairs;</li> <li>• Type and quantity of halocarbon and date recovered;</li> <li>• Charging capacity of the system.</li> </ul>	<p><b>Owner or Operator</b></p>
<p><b>Halocarbon Reporting Journal or Halocarbon Service Log Book</b></p>	<p>The <b>Halocarbon Reporting Journal</b> or <b>Halocarbon Service Log Book</b> is to be kept on file by the owner for at least 5 years from the date the information in the log is</p>	<p><b>Owner or Operator</b></p>



	produced.	
<b>Leak Test Notice</b>	<p>A contractor <b>Leak Test Notice</b> must be completed and affixed to the equipment or placed inside the document tube any time a leak test is conducted on the system. The <b>Service Notice Form (Appendix D: Figure D3)</b> from the <b>Halocarbon Reporting Journal (Appendix D: Figure D2)</b> must also be completed and kept onsite either to be retained inside the <b>Documentation Journal</b> or on/in the equipment or document tube.</p> <p>The following information is required in the <b>Leak Test Notice</b> and <b>Service Notice Form</b>:</p> <ul style="list-style-type: none"> <li>• Name and Address of the owner of the system;</li> <li>• Name of operator of the system;</li> <li>• Specific location of the system;</li> <li>• Description of the system;</li> <li>• Name of certified person;</li> <li>• Certificate number;</li> <li>• Name of employer of certified person (if applicable);</li> <li>• Type of halocarbon contained in the system;</li> <li>• Date of the last 2 leak tests performed on the system.</li> </ul>	<b>Contractor</b>
	<p>A copy of the <b>Leak Test Notice</b> must be kept on file in addition to the copy that is attached to the equipment.</p> <p>The owner must keep a copy of the <b>Leak Test Notice</b> for 5 years from the date the notice is completed.</p>	<b>Owner</b>
<b>Release Reports</b>	<p>A <b>Halocarbon Release Report Form</b> must be completed for all releases of halocarbons. (<b>Appendix D: Figure D5</b>).</p>	<b>Contractor</b>
	<p>Information regarding release report completion and filing is provided in <b><u>Halocarbon SOP 5 - Reporting of Halocarbon Releases</u></b></p> <p>Copies of all Release Reports and Release Report Summaries are to be maintained by the owner for at least 5 years.</p>	<b>Owner</b>



<b>Disposal or Decommissioning Notice</b>	<p>Prior to disposal or decommissioning a system the owner must complete a <b>Disposal or Decommissioning Notice (Appendix D: Figure D4)</b>.</p> <p>A copy of the notice must be attached to the equipment.</p> <p>The owner must keep a copy of the Disposal or Decommissioning Notice on file for at least 5 years.</p>	<b>Contractor or Owner</b>
	<p>The following information is required on the <b>Disposal or Decommissioning Notice</b>:</p> <ul style="list-style-type: none"> <li>• Name and address of owner of the system;</li> <li>• Name of operator of the system;</li> <li>• Specific location of the system before its Dismantling, Decommissioning or Destruction;</li> <li>• Description of the system;</li> <li>• Name of the service technician who recovered the halocarbons;</li> <li>• Certificate number of the service technician (if applicable);</li> <li>• Name of employer of the service technician (if applicable);</li> <li>• Type and quantity of halocarbon and date recovered;</li> <li>• Type and charging capacity of the system;</li> <li>• Final destination of the system.</li> </ul>	<b>Contractor</b>
<b>Summary of Document Control Requirements</b>	<p>In addition to the above noted regulatory requirements, <b>Table 2</b> identifies the documents that must be maintained by the owners/operators. <b>Table 2</b> also identifies the location and retention time for each document type.</p>	<b>Owner or Operator</b>

**Table 2: Halocarbon Document Control Requirements**

Type of Document	Responsibility for Completion or Receipt	Location of Document	Retention time
<b>Regulatory Documents</b>			
<b>Halocarbon Service Journal or Halocarbon Service Log Book</b>	Certified Technician Owner	On-site file	<b>5 years from date of entry</b>
<b>Leak Test Notice and Service Notification Form</b>	Certified Technician	On equipment On-site file	<b>5 years</b>



<b>Release Reports</b>	Certified Technician Owner Operator	On-site file	<b>5 years</b>
<b>Disposal or Decommissioning Notice</b>	Certified Technician	On equipment On-site file	<b>5 years</b>
<b>Bi-annual Halocarbon Release Report Summary</b>	Owner	On-site	<b>5 years</b>
<b>24-hour Halocarbon Release Report</b>	Owner	On-site file Copy to ROEC Copy to EC	<b>5 years</b>
<b>14 day Halocarbon Release Follow-up Report</b>	Owner	On-site file Copy to ROEC Copy to EC	<b>5 years</b>
<b>Correspondence from Regulatory Agencies</b>	Owner	On-site file	<b>5 years</b>
<b>Non-Regulatory Requirements</b>			
<b>Halocarbon Inventory Tags</b>	ROEC Owner	On equipment	<b>Remove when equipment is decommissioned or disposed</b>
<b>Halocarbon Inventory</b>	ROEC Owner	On-site file	<b>5 years after equipment is disposed or decommissioned</b>
<b>Emergency Response Procedures</b>	Owner Operator	On-site file	<b>5 years with annual review/revision</b>
<b>Regional Halocarbon SOPs</b>	ROEC Owner	On-site file	<b>Maintain current versions</b>
<b>Training Records (Halocarbon EMP awareness training)</b>	ROEC Owner Operator	On-site file	<b>Indefinitely</b>

**Note:** Records may be maintained in hard copy or electronic form depending on the type of document. Documents must be accessible at all times for review by regulatory personnel.



# Appendix A

## Contractor Awareness Document



As a Service Contractor for  
**Heating, Refrigeration, Air-Conditioning Systems,**  
you need to know about the

**Federal Halocarbon Regulations, 2003 (FHR 2003)**

March 2005

**What are the FHR 2003?**

- Regulations under the authority of the *Canadian Environmental Protection Act, 1999 (CEPA 1999)*.
- Their purpose is to prevent releases of ozone-depleting substances and of other halocarbons, such as CFCs, HCFCs, HFCs, Halons, other BFCs or HBFCs, alone or in mixtures/blends.

**Do the FHR 2003 apply to me?**

- Yes, if you are a service person, technician or mechanic working on or caring for a refrigeration or air-conditioning system that is :
  - **owned by the Government of Canada (department, board or agency, a Crown corporation) or a Federal Work or Undertaking; or**
  - **located on federal land or aboriginal land.**

**What are examples of a Federal Work or Undertaking?**

- Banks, broadcasting and telecommunications corporations, airports, airlines, port authorities, ships as well as buses, railways, trucking, pipelines, and telegraph cables which operate interprovincially or internationally.

**What is Not Allowed?**

- Cannot release, allow or cause the release of a halocarbon except the release resulting from a purge system that emits less than or equal to 0.1 kg of halocarbon per kg of air purged.
- Cannot install systems that use CFCs, Halon 1011, Halon 1211, Halon 1301, Halon 2402, other BFCs or HBFCs, carbon tetrachloride or methyl chloroform, unless authorized to do so with a permit under the *FHR 2003*.
- Cannot use CFCs, Halon 1011, Halon 1211, Halon 1301, Halon 2402, and other BFCs or HBFCs for leak testing.
- Cannot charge a leaking system.
- Cannot charge CFCs into an air-conditioning system designed for cooling occupants in vehicles.
- Cannot charge CFCs into a refrigeration or air-conditioning system that is installed in, attached to, or operates in, on or in conjunction with a means of transportation (military ships are excluded).
- **Effective January 1, 2005 - Cannot charge CFCs into refrigeration or air-conditioning systems, other than chillers, small systems or systems on military ships.**
- **Effective January 1, 2005 – Cannot charge CFCs into a chiller that has undergone an overhaul (Military ships are excluded. Exemption is provided on the condition that Environment Canada is notified and the chiller is converted or replaced within 12 months).**
- Effective January 1, 2010 – Cannot charge CFCs into a refrigeration or an air-conditioning system on military ships.
- Effective January 1, 2015 – Cannot operate a chiller containing CFCs.

Cont'd...





*What else do I need to know?*

1. Work must be done according to *The Servicing of Halon Extinguishing Systems (ULC/ORD-C1058.18-1993)*.
2. Halocarbons must be stored, transported and purchased in a refillable container designed to contain that specific type of halocarbon.
3. An entry in the service log is required whenever a system is installed, serviced, leak tested, charged or if any other work is done that may cause a halocarbon release.
4. Information to be contained in the service logs and notices is outlined in Schedule 2 of the regulations.
5. Notices must be filled out completely and affixed to the system after a leak test, and/or before dismantling, decommissioning or destruction of the system.
6. Notices that are affixed to the equipment cannot be removed except to replace with another notice.
7. Before doing any work that may cause a release, the halocarbon must be recovered into a refillable container designed to contain that specific type of halocarbon.
8. Only refillable containers designed to contain that specific type of halocarbon are to be used for recovering halocarbons.
9. Before dismantling, decommissioning or destruction of a system, all of the halocarbons must be recovered.
10. Recovery equipment used must have a transfer efficiency of at least 99% as defined in **Halon Recovery and Reconditioning Equipment (ULC/ORD-C1058.5-1993)**.
11. A leak test is required before charging any system.
12. Leak tests must be done at least once every 12 months for all fire extinguishing systems, except portable fire extinguishers and systems with a charging capacity of less than 10 kg located in military vehicles.
13. If a leak is found or a release occurs, you must stop the leak immediately and notify the owner.

*How can I find more information?*

This summary is not intended to replace the published Regulations, which must be consulted regarding full FHR 2003 obligations. The FHR 2003 is available from the following website:

Copies of CEPA 1999 and FHR 2003 are available online at:  
<http://laws-lois.justice.gc.ca/eng/regulations/SOR-2003-289/index.html>

or contact the Atlantic Region representative at ECCC:

**Chris Feetham**  
Senior Compliance Promotion Officer  
Environmental Protection Branch, Environment and Climate Change Canada  
[chris.feetham@canada.ca](mailto:chris.feetham@canada.ca) / Tel: 902-426-2401



Title: **Halocarbon Procedure/ Overview and SOPs**

Version: 3.0

Intelex Document #: 13131

Effective Date: 29<sup>th</sup> November 2016

Date of Latest Revision: 23<sup>rd</sup> April 2018

***What about Newfoundland and Labrador's Provincial Halocarbon Regulations under The Environmental Protection Act?***

Newfoundland and Labrador's Halocarbon Regulations have similar conditions to the FHR 2003 and are compatible with other provincial governments. The regulations are reviewed continuously to ensure measures set out in the Canadian Council of Ministers of the Environment (CCME) 2001 National Action Plan for the Control of Ozone-Depleting Substances (ODS) and their Halocarbon Alternatives as well as Canada's Strategy to Accelerate the Phase-out of CFCs and Halons Uses and to Dispose of the Surplus Stocks (212 KB) are met. The NL provincial *Halocarbon Regulations under the Environmental Protection Act* is available from the following website:

<http://www.assembly.nl.ca/legislation/sr/regulations/rc050041.htm>.

For more information about the NL Provincial Halocarbon Regulations, please contact:

**Angela Burridge**

Senior Environmental Scientist

Newfoundland and Labrador

Department of Environment and Conservation

St. John's, NL, A1B 4J6

Tel: 709 729-4273, Fax: 709 729-6969

Email: [angelaburridge@gov.nl.ca](mailto:angelaburridge@gov.nl.ca)

**Disclaimer:**

This document contains some of the requirements of the *Federal Halocarbon Regulations, 2003 (FHR 2003)*. However, in the event of inconsistencies between this document, the *Canadian Environmental protection Act, 1999 (CEPA 1999)*, and the *FHR 2003, CEPA 1999* and the *FHR 2003* will prevail.



# Appendix B

## Large System and Fixed Fire Suppression System Ownership Validation Form



Title: **Halocarbon Procedure/ Overview and SOPs**

Version: 3.0

Intelex Document #: 13131

Effective Date: 29<sup>th</sup> November 2016

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In support of the National Halocarbon EMP, ROEC Newfoundland and Labrador has created this form to establish roles and responsibilities regarding the management of halocarbons and halocarbon-containing systems in the Newfoundland and Labrador Region.

All custodians mentioned on this form are considered owners under the *FHR, 2003* and as such have responsibilities for the care and maintenance of this equipment

Under the *FHR, 2003*, "owner" means to hold a right in or to have possession, control or custody of, to be responsible for the maintenance, operation or management of, or to have the power to dispose of a system.

<b>Date of Validation:</b>	
<b>Site Name:</b>	
<b>Region:</b>	NL Region
<b>Address:</b>	
<b>DFO Real Property Site Category (1 to 7):</b>	
<b>Site Owner:</b>	
<b>Custodians on Site:</b>	
<b>Who would attend EC inspections?</b>	
<b>Who is responsible for disposal?</b>	
<b>Who is responsible for the management of the equipment?</b>	
<b>Who has control of daily operations of the equipment?</b>	
<b>Who purchased the equipment?</b>	
<b>What program does it serve?</b>	

**Large Halocarbon-Containing Systems Inventory**

<b>Description of System</b>	
<b>Cooling Capacity</b>	
<b>Size of System</b>	
<b>ROEC Inventory #</b>	
<b>Make</b>	
<b>Model</b>	
<b>Serial Number</b>	
<b>Type of Halocarbon</b>	
<b>Quantity of Halocarbon</b>	
<b>Location</b>	

**Please write your name and sign below to validate that the information is correct and reflects the present inventory of halocarbon-containing**

**Owner and/or Responsible for Equipment:**

Name	Signature	Date
Title _____		



# Appendix C

## Halocarbon (Refrigerants and Halon) Information Sheet



**Halocarbon (Refrigerants and Halon) Information Sheet**

*Phase-out is applicable only to a chiller with a secondary refrigerant; not applicable to small packaged units.*

Phase out by 2015	
Common name/ ASHRAE number	
R-10	
<b>CFCs:</b>	
R-11	
<b>R-12</b>	
R-12B2	
R-13	
R-13B1	
R-22B	
R-40	
R-113	
R-114	
R-115	
R-140a	
<b>Blends:</b>	
<b>500</b> (R-12/152a (73.8/26.2))	
<b>501</b> (R-22/12 (75.0/25.0))	
<b>502</b> (R-22/115 (48.8/51.2))	
<b>503</b> (R-23/13 (40.1/59.9))	
<b>505</b> (R-12/31 (78.0/22.0))	
<b>506</b> (R-31/114 (55.1/44.9))	
Halon 1011	
Halon 1211	
Halon 1301	
Halon 2402	
Hydrobromofluorocarbons (HBFC)	

\*A refrigerant can be called by its chemical acronym or the letter R, for example: CFC-12 or R-12; HCFC-22 or R-22.

The most common refrigerant which will **not** be phased out is **R-134a**.

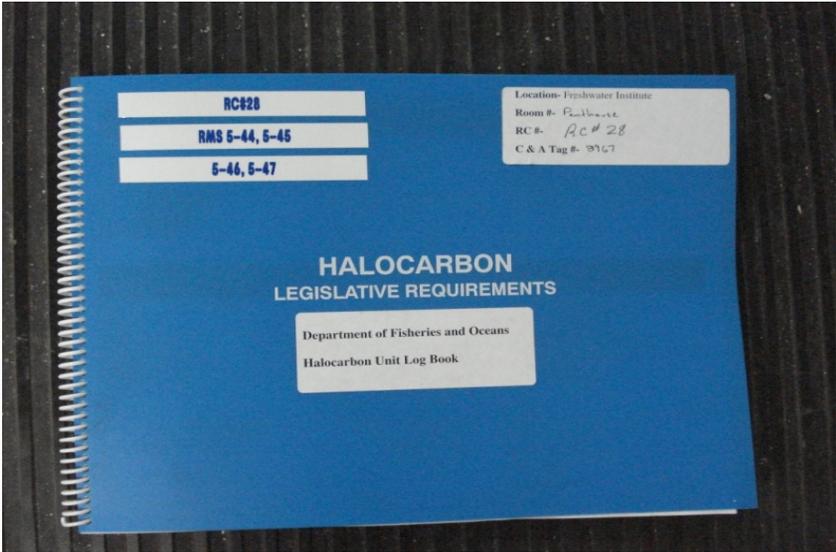
Recommended replacement refrigerants:	
Phase Out: Replace With	
R12:	R134a, R407D, R413A, R600a
R22:	R407C (high temp) or R404A (low temp), R410A, R417A, R290, R1270
R500:	R134a, R407D
R502:	R440A, R407A, R507, R290, R1270
R503:	R23, R508A

Phase out by 2030		
Common name/ ASHRAE number		
<b>HCFCs:</b> 21,	142b	234
<b>22</b>	151	235
31	221	241
121	222,	242
122	223	243
123	224	244
124	225	251
131	225ca	252
132	225cb	253
133	226	261
141	231	262
141b	232	271
142	233	
<b>HBFC-22B1</b>		
<b>Bromochloromethane</b>		
<b>Blends:</b>		
<b>400</b>	R-12/114 (must be specified) (50.0/50.0) (60.0/40.0)	
<b>401A</b>	R-22/152a/124 (53.0/13.0/34.0)	
<b>401B</b>	R-22/152a/124 (61.0/11.0/28.0)	
<b>401C</b>	R-22/152a/124 (33.0/15.0/52.0)	
<b>402A</b>	R-125/290/22 (60.0/2.0/38.0)	
<b>402B</b>	R-125/290/22 (38.0/2.0/60.0)	
<b>403A</b>	R-290/22/218 (5.0/75.0/20.0)	
<b>403B</b>	R-290/22/218 (5.0/56.0/39.0)	
<b>405A</b>	R-22/152a/142b/C318 (45.0/7.0/5.5/42.5)	
<b>406A</b>	R-22/600a/142b (55.0/4.0/41.0)	
<b>408A</b>	R-125/143a/22 (7.0/46.0/47.0)	
<b>409B</b>	R-22/124/142b (65.0/25.0/10.0)	
<b>411A</b>	R-1270/22/152a (1.5/87.5/11.0)	
<b>411B</b>	R-1270/22/152a (3.0/94.0/3.0)	
<b>412A</b>	R-22/218/143b (70.0/5.0/25.0 k)	
<b>414A</b>	R-22/124/600a/142b (51.0/28.5/4.0/16.5)	
<b>414B</b>	R-22/124/600a/142b (50.0/39.0/1.5/9.5)	
<b>415A</b>	R-22/152a (82.0/18.0)	
<b>415B</b>	R-22/152a (25.0/75.0)	
<b>416A</b>	R-134a/124/600 (59.0/39.5/1.5)	
<b>418A</b>	R-290/22/152a (1.5/96.0/2.5)	
<b>420A</b>	R-134a/142b (88.0/12.0)	
<b>509A</b>	R-22/218 (44.0/56.0)	



# Appendix D

## Accompanying Figures and Tables from Halocarbon SOP's



**Figure D1: Halocarbon Log Book**

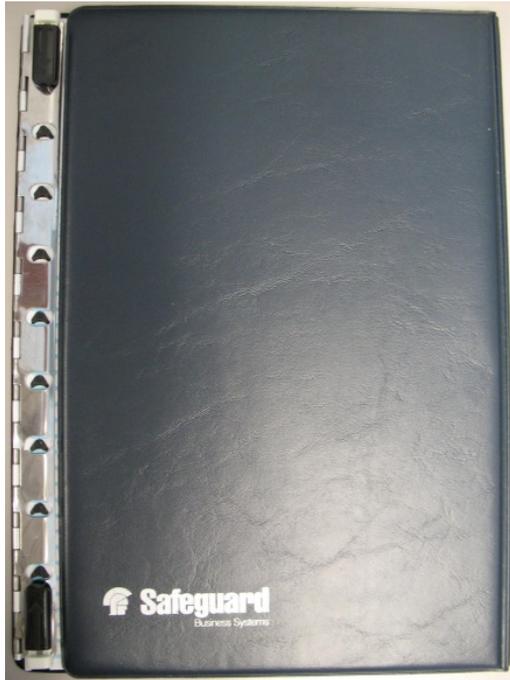
**Table D1: Sample Page from Log Book**

Name of Certified Person	Cert. #	Employer of Cert. Person	Description, Location of System and Inventory Number	Amount of Halocarbon		Amount of Halocarbon		Charging Capacity of System	Maintenance Performed (i.e. Service / Repair / Leak Test)	Date of Service	Duration	Signature
				Type	Quantity	Recovered	Added					



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**Figure D2: Halocarbon Reporting Journal**

**Table D2: Sample Page from Halocarbon Reporting Journal**

REFRIGERANT DOCUMENTATION JOURNAL							REFRIGERANT DOCUMENTATION JOURNAL											
BUILDING NAME						ADDRESS	BUILDING NAME						ADDRESS OF BUILDING					
DATE	EQUIPMENT LOCATION	EQUIPMENT SERIAL #	CHARGING CAPACITY	REFRIGERANT CHARGED	RECORD NUMBER	LEAK TEST PERFORMED Y/N	DATE	EQUIPMENT LOCATION	EQUIPMENT SERIAL #	CHARGING CAPACITY	REFRIGERANT CHARGED	RECORD NUMBER	LEAK TEST PERFORMED Y/N	LEAKS DETECTED Y/N	LEAKS REPAIRED Y/N	SERVICE COMPANY	TECHNOLOGIST	
				TYPE	AMOUNT						TYPE	AMOUNT						
BALANCE FORWARD →							BALANCE FORWARD →											
						1							1					
						2							2					
						3							3					
						4							4					
						5							5					
						6							6					
						7							7					
						8							8					
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						23							23					
						24							24					



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Feb 12, 2015	Building 7, Rm # 127	8546274	65 Kg	R-134a	65 Kg	3376
DATE	EQUIPMENT LOCATION	EQUIPMENT SERIAL #	CHARGING CAPACITY	TYPE	AMOUNT REFRIGERANT CHARGED	RECORD NUMBER

**SAFEGUARD - REFRIGERANT SERVICE RECORD**  
Call (800) 565-0645 for information.

THIS NOTICE MUST NOT BE REMOVED UNLESS A NEW NOTICE IS ATTACHED

RECORD NO. 3376

BUILDING OPERATOR: Joe Manning  
CONTACT NUMBER: (709) 772-2134  
SERVICE COMPANY: Van Isle Refrigeration  
SERVICING TECHNICIAN: Cyril Gosse  
TECHNICIAN'S O.D.S. CERTIFICATION #: 48965  
OWNER OF EQUIPMENT: Jim O'Brien  
ADDRESS OF OWNER: 187 North Pond Road, Torbay, NL

Leak Test Performed  Yes  No  
Date of Last Two Leak Tests: 1 June 8, 2013 2 June 6, 2014  
Leak Detected  Yes  No Leak Repaired  Yes  No  
System Charged  Yes  No Halocarbon Recovered  Yes  No  
refrigerant type: R-124a amount: 65 Kg  
refrigerant type: R-134a amount: 50 Kg

REPAIR ESTIMATE NO. AVS/NP-QS1, B10R/2001-19M, 01/11

SERVICE ACTIVITY TYPE  
 Servicing  Leak Testing  Installation  Conversion  
 Recommissioning  Other

**COMMENTS**  
Leak discovered during routine leak test, recovered halocarbon and replaced failed o-ring. Performed second leak test and recharged system.

CERTIFIED TECHNICIAN SIGNATURE: *Cyril Gosse*

The Canadian Environmental Protection Act, Federal Halocarbon Regulations specify that:  
-Release of an ozone depleting substance into the environment is prohibited.  
-A person must not add an ozone depleting substance to equipment, devices or containers which are leaking.

\*All persons servicing equipment must have completed an environmental awareness course approved by Environment Canada.  
\*A refrigerant control record (such as this) must be affixed to the equipment, and a service log kept at the servicer's place of business for 5 years.  
\*Any person contravening the regulation is personally liable and subject to penalty under the CEPA.

**Figure D3: Sample Leak Test Notice**

**DISPOSAL OR DECOMMISSIONING NOTICE**

0376

**DO NOT REMOVE THIS NOTICE FROM UNIT**

The information below must be recorded in the service log and the halocarbon inventory.

Operator Name: Joe Manning Contact operator at (709) 772-2134 for more information.

**ALL HALOCARBONS MUST BE REMOVED BEFORE DISPOSAL OR DECOMMISSIONING**

Equipment Owner	Equipment Information		Technician Information			
Name: Jim O'Brien	Serial Number	8546274	Technician Name	Cyril Gosse		
Address of Owner:	Type of System	5134a Air Conditioning	Disposal Company	Van Isle Refrigeration		
187 North Pond Road, Torbay, NL	Refrigerant Type & Quantity	5134a 15kg	ODS Course #	48965		
	Cooling Capacity (kW or tons)	9.2 tons	Trade Qualification Certificate #	649802		
	Location (prior to action)	17 Robin Hood Bay Road, St. John's				
	Final Destination of System	196 Caribou Lane, Carbonear				
		Slade's Recycling				
<b>Activity Type</b>						
	<input checked="" type="checkbox"/> Disposal	<input checked="" type="checkbox"/> Decommissioning	<input type="checkbox"/> Temporary Decommissioning			
	Date	Yes	No	Refrigerant Type	Amount (kg)	Comments
Refrigerant	Feb 6, 2015	/		5134a	65kg	Removed from site same day
Recovered	Feb 6, 2015	/		N/A	N/A	for disposal at Slade's Recycling

Part 1 / WHITE: Affix to equipment  
Part 2 / YELLOW: Retain with service log



**Figure D4: Sample of Disposal or Decommission Notice**

### HALOCARBON RELEASE REPORT

#### REPORT TO ENVIRONMENT CANADA OF RELEASES OF HALOCARBONS EXCEEDING 10 KG

REPORTING PERIOD: January 1<sup>st</sup> - June 30<sup>th</sup> 2014

Reports must be sent to the following address no later than 30 days after the end of the reporting period

Office of Environmental Coordination  
Real Property, Safety & Security  
Fisheries & Oceans  
10 Barter's Hill, St. John's, NL, A1C 5X1

SITE NAME: IOS

EQUIPMENT OWNER: Jim O'Brian

SITE ADDRESS: 17 Robin Hood Bay Road,  
St John's, NL

FACILITY CONTACT NAME: Joe Manning

FACILITY CONTACT NUMBER: (709) 777-2134

RELEASE NUMBER	DATE OF RELEASE (or detection)	HALOCARBON RELEASED	QUANTITY RELEASED (Kg measured or est'd)	TYPE OF HALOCARBON SYSTEM or EQUIPMENT	EQUIPMENT LOCATION	SERIAL NO. of EQUIPMENT (if applicable)
1	Jan 18, 2015	5134a	15Kg	Air Conditioning	Roof of Office Building	6546274 PAC21249

RELEASE NUMBER	CIRCUMSTANCES LEADING TO RELEASE (description of cause)	CORRECTIVE ACTIONS TAKEN TO PREVENT SUBSEQUENT RELEASES
1	Failed O-ring	Replaced failed o-ring and performed second leak test

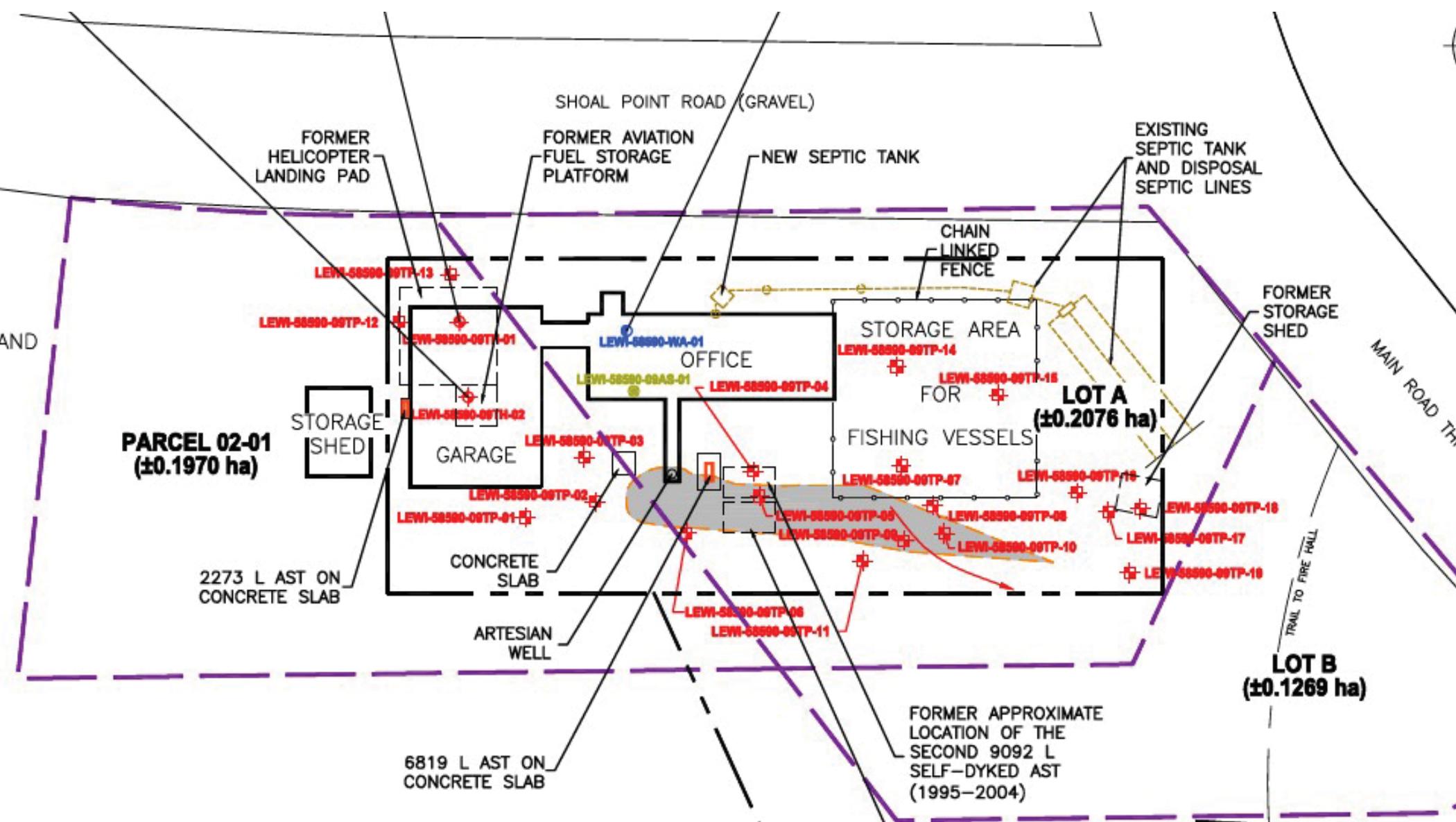
Part 1 / WHITE: Retain with service log  
Part 2 / PINK: Send to Environment Canada  
Part 3 / BLUE: Send to Regional Environmental Coordinator

Document on file in regard to FEDERAL HALOCARBON REGULATIONS.  
Do not destroy for five years from issuance date.

**Figure D5: Sample Release Report**

**Table D3: Regional Office of Environmental Coordination Contacts**

<b>ROEC Manager</b> Maritimes and Gulf	Phone: (902) 293-1532 Email: <a href="mailto:XMAREnvironmentalManagement@dfo-mpo.gc.ca">XMAREnvironmentalManagement@dfo-mpo.gc.ca</a>
<b>ROEC Manager</b> Newfoundland and Labrador	Phone: (709) 772-5692 Email: <a href="mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca">ROEC-Environmental-Management@dfo-mpo.gc.ca</a>
<b>Environmental Officer</b> Maritimes and Gulf	Phone: (902) 219-0738 Email: <a href="mailto:XMAREnvironmentalManagement@dfo-mpo.gc.ca">XMAREnvironmentalManagement@dfo-mpo.gc.ca</a>
<b>Environmental Officer</b> Newfoundland and Labrador	Phone: (709) 772-7045 Email: <a href="mailto:ROEC-Environmental-Management@dfo-mpo.gc.ca">ROEC-Environmental-Management@dfo-mpo.gc.ca</a>



SHOAL POINT ROAD (GRAVEL)

FORMER HELICOPTER LANDING PAD

FORMER AVIATION FUEL STORAGE PLATFORM

NEW SEPTIC TANK

EXISTING SEPTIC TANK AND DISPOSAL SEPTIC LINES

CHAIN LINKED FENCE

FORMER STORAGE SHED

MAIN ROAD TRAIL

AND

PARCEL 02-01 (±0.1970 ha)

STORAGE SHED

2273 L AST ON CONCRETE SLAB

6819 L AST ON CONCRETE SLAB

CONCRETE SLAB

ARTESIAN WELL

GARAGE

OFFICE

STORAGE AREA FOR FISHING VESSELS

LOT A (±0.2076 ha)

LOT B (±0.1269 ha)

FORMER APPROXIMATE LOCATION OF THE SECOND 9092 L SELF-DYKED AST (1995-2004)

TRAIL TO FIRE HALL

LEWI-58590-09TP-13

LEWI-58590-09TP-12

LEWI-58590-09TP-01

LEWI-58590-WA-01

LEWI-58590-09AS-01

LEWI-58590-09TP-04

LEWI-58590-09TP-14

LEWI-58590-09TP-15

LEWI-58590-09TP-02

LEWI-58590-09TP-03

LEWI-58590-09TP-07

LEWI-58590-09TP-16

LEWI-58590-09TP-01

LEWI-58590-09TP-02

LEWI-58590-09TP-05

LEWI-58590-09TP-08

LEWI-58590-09TP-18

LEWI-58590-09TP-06

LEWI-58590-09TP-10

LEWI-58590-09TP-17

LEWI-58590-09TP-19

LEWI-58590-09TP-06

LEWI-58590-09TP-11