

## Environmental Management Procedure (EMP) 4.4.6.1.4

### Subject: Ozone Depleting Chemicals

1. Purpose: This EMP establishes the procedures for the proper management for the use and disposal of Ozone Depleting Chemicals (ODC's).
2. Document Control: This is a controlled document. Controlled documents are updated as required, reviewed at least annually, and re-dated if changed. Any documents to include blank forms appearing in paper form are not controlled and should be checked against the file version prior to use on the:

JBLE – Eustis Environmental website: <http://www.jble.af.mil/Units/Army/Eustis-Enviromental/>

3. References:
  - A. JBLE-I 32-101, Environmental Management
  - B. EMP Dictionary
  - C. EMP 4.4.6.1 Air Pollution Management
  - D. Joint Base Langley- Eustis ODC Elimination Plan.
4. Scope: This EMP applies to all Activities and personnel, including military, civilians, vendors, suppliers, and contractor personnel who enter JBLE-Eustis. The definition of an Activity can be found in JBLE I 32-101.
5. Roles and Responsibilities:
  - A. Only the Commanding General can authorized the purchase of Class 1 ODCs and only under special circumstances.
  - B. Commanders/Directors JBLE-E Activities
  - C. Provide qualified personnel for the proper use and disposal of ODC's.
6. Procedures:
  - A. Activities will identify all personnel with a role in ODC usage to the CED/Environmental Element.
  - B. Activities performing maintenance on ODC containing equipment must maintain records of services and amount of ODCs added to the system or amount removed and disposal location of any ODC.
  - C. Activities utilizing products, which have Class 1 ODCs as components, must document the requirement to use the Class 1 ODC and must prove that there is no approved substitute for the Class 1 ODC. As with all Hazardous Materials, all ODCs must be acquired through the HazMart.
  - D. Activities will ensure that their personnel are instructed not to vent any ODCs to the atmosphere, as this is a significant legal infraction. Only personnel who have completed the EPA's training and certifications program are allowed to service or otherwise maintain ODC containing equipment. Each Activity will maintain a list of personnel who are certified and submit certifications to the Air Quality Program Manager at Fort Eustis Environmental Element.
  - E. All ODC containing equipment, generally small appliances, being disposed must have the ODC and contaminated oil removed from the equipment by a certified technician. It's the owner's responsibility to

fund this. Documentation of this removal will be provided at the time of turn-in. The certified technician will sign a statement listing the serial number of the equipment and date of removal along with a copy of their license. Metal parts of these appliances will be separated from the non-metal portions prior to turn-in at the Solid Waste Recycling Center (SWRC). Abandoned equipment found on Post will be reported to the Military Police and then taken to SWRC for disposal. CED-OF will provide the certified technician for removing the ODCs.

- F. CED/Operations Flight will maintain a supply of ODCs to be used by the installation. All excess ODCs destined for turned-in or disposal will be coordinated with CED-OF in order to determine the installation's need for the ODC. All ODCs declared excess to installation requirements will be turned-in to the Defense Logistics Agency (DLA) who maintains the DOD ODC Reserve. The turn-in should be to the Defense Depot Richmond (DDRV) SW04, Cylinder Operations, 8000 Jefferson Davis Highway, Richmond, VA. 23297-5900 (804-279-4256/2393 or DSN 695-4256/2393). It's the Activity's responsibility for funding the disposal, which includes any transportation and associated costs. Typically there is no charge for disposal, but packaging and transportation, etc., usually does incur a monetary charge. Activities will notify CED/CEIE of all turn-ins.
- G. ODCs which cannot be reutilized by the installation or turned-in to DLA must be treated as hazardous or non-hazardous wastes and turned into the HWAFF IAW Appendix H.

H. Group I (from [section 602](#) of the [CAA](#))

(1). Trichlorofluoromethane	CFC-11	(CCl3F)	75-69-4
(2). Dichlorodifluoromethane	CFC-12	(CCl2F2)	75-71-8
(3). 1,1,2-Trichlorotrifluoroethane	CFC-113	(C2F3Cl3)	76-13-1
(4). Dichlorotetrafluoroethane	CFC-114	(C2F4Cl2)	76-14-2
(5). Monochloropentafluoroethane	CFC-115	(C2F5Cl)	76-15-3

I. Group II (from [section 602](#) of the [CAA](#))

(1). Bromochlorodifluoromethane	Halon 1211	(CF2ClBr)	353-59-3
(2). Bromotrifluoromethane	Halon 1301	(CF3Br)	75-63-8
(3). Dibromotetrafluoroethane	Halon 2402	(C2F4Br2)	124-73-2

J. Group III (from [section 602](#) of the [CAA](#))

(1). Chlorotrifluoromethane	CFC-13	(CF3Cl)	75-72-9
(2). Pentachlorofluoroethane	CFC-111	(C2FCl5)	354-56-3
(3). Tetrachlorodifluoroethane	CFC-112	(C2F2Cl4)	76-12-0
(4). Heptachlorofluoropropane	CFC-211	(C3FCl7)	422-78-6
(5). Hexachlorodifluoropropane	CFC-212	(C3F2Cl6)	3182-26-1
(6). Pentachlorotrifluoropropane	CFC-213	(C3F3Cl5)	2354-06
(7). Tetrachlorotetrafluoropropane	CFC-214	(C3F4Cl4)	29255-31-0
(8). Trichloropentafluoropropane	CFC-215	(C3F5Cl3)	4259-43-2

(9).	Dichlorohexafluoropropane	CFC-216	(C3F6Cl2)	661-97-2
(10).	Chloroheptafluoropropane	CFC-217	(C3F7Cl)	422-86-6
K.	Group IV (from <a href="#">section 602</a> of the <a href="#">CAA</a> )			
(1).	Carbon tetrachloride		CCl4	56-23-5
L.	Group V (from <a href="#">section 602</a> of the <a href="#">CAA</a> )			
(1).	Methyl Chloroform (1,1,1-trichloroethane)		(C2H3Cl3)	71-55-6
M.	Group VI (listed in the <a href="#">Accelerated Phaseout Final Rule</a> )			
(1).	Methyl Bromide		(CH3Br)	574-83-9

#### EPA Refrigerant Management Mandatory Requirements

1. Provide the name, address, telephone number, and technician certification of each person employed by the facility, including contractors, at any time since October 1, 2005, who has serviced, repaired, maintained and/or disposed of any equipment containing and/or using a class I or class II substance as a refrigerant. **You must have an EPA Section 608 certification to service refrigeration and air conditioning equipment containing HCFCs.** EPA does not require certification for technicians that service appliances with non-ozone depleting refrigerants.
2. Provide the name, address, telephone number, and technician certification of each person employed by the facility, including contractors, at any time since October 1, 2005, who has serviced, repaired, maintained and/or disposed of any equipment containing and/or using a non-ozone depleting substance as a refrigerant.
3. For any time since October 1, 2005, provide a list of appliances located at the facility, owned or operated by the facility, and/or its contractors, that have a capacity of fifty pounds or more of a class I or class II refrigerant and provide the following information for each appliance:
  - a. The type of appliance, i.e., commercial refrigeration (CR) appliance, industrial process refrigeration (IPR) appliance, comfort cooling appliance, or other type of refrigeration appliance;
  - b. The location of each appliance (please provide a floor plan of the facility);
  - c. The manufacturer, serial number, or other method of identification utilized by the facility and/or its contractors; and

- d. The amount of the full charge of refrigerant, the type of refrigerant used, and the date full charge was determined.
4. For any time since October 1, 2005, provide records, work logs, service tickets, invoices, and supporting documentation maintained by the facility providing work performed by the facility employees and/or contractors, as identified in response to question 1, of maintenance, service, repair, and/or disposal of the facility's appliances, containing 50 pounds or more of a class I or class II refrigerant. The documentation required should contain the following:
  - a. The date and type of service performed, i.e., repair, maintenance and/or disposal;
  - b. The date any leak was discovered;
  - c. A complete, detailed description of any service performed;
  - d. The amount of refrigerant added at the completion of each service performed; and
  - e. The name of the technician who performed the work.
5. For each repair done on an IPR appliance since October 1, 2005, indicate whether an **initial** verification test was conducted. Describe the procedures used and identify the specific records, provided in response to question 1 that document such initial verification. [Please provide second copies of such documentation if doing so facilitates identification.]
6. For each initial verification test conducted on an IPR appliance since October 1, 2005, indicate whether a **follow-up** verification test was conducted. Describe the procedures used and identify the specific records, provided in response to question 1 that document such follow-up verification. [Please provide second copies of such documentation if doing so facilitates identification.]
7. For any time since October 1, 2005, in which the facility, and/or its contractors, mothballed any appliance located at the facility, identify:
  - a. The date on which the appliance was mothballed with supporting records;
  - b. The type of appliance, i.e., CR, IPR, comfort cooling or other type of appliance;
  - c. The manufacturer;
  - d. The unit's serial number, or other method of identification utilized
  - e. Records, if any, provided in response to question 4, that document repair and/or initial and follow-up verification of the unit prior to, or after mothballing. [Please provide second copies of such documentation if doing so facilitates identification.]
8. For any time since October 1, 2005, identify any appliance located at the facility that leaked refrigerant, indicate whether the facility, and/or its contractors, intended to and/or actually developed a retrofit or retirement plan. Provide a dated copy of

- each plan developed by the facility. For each appliance identified in response to this question, provide supporting documentation with the following information:
- a. The date the facility notified EPA about its intention to develop a retrofit or retirement plan; and
  - b. Whether the facility complied with the one (1) year time limit for development of the plan.
9. If the facility, and/or its contractors, owned or operated, at any time since October 1, 2005, any equipment to recover or recycle refrigerants used at the facility, provide the following information:
- a. A copy of any invoice or other record documenting the purchase or rental of such equipment, including the type of equipment, the manufacturer's name, the equipment model number, year manufactured, and any associated serial number; and
  - b. A copy of the facility's, and/or its contractors' equipment certification sent to EPA that demonstrates that the facility has acquired approved refrigerant recovery or recycling equipment, the equipment is working properly based upon the ARI Standard, and that the facility knows how to properly use such equipment.
10. For any time since October 1, 2005, for any purchases or acquisitions made by the facility, and/or its contractors, provide copies of records, including, but not limited to, receipts, invoices, purchase orders, or bills of lading, concerning refrigerant. The information should include the name, address and telephone number of each person, agent, or business entity from whom the facility purchased refrigerant.
11. Provide a copy of supporting documentation for any modifications or revisions to the SOP for Facility-wide management of the CFC appliances. Include the date of implementation of each SOP. If no modifications or revisions were made, indicate that no modifications or revisions were made and provide an explanation.
12. Provide a copy of all leak-rate calculations performed and all follow-up actions.
13. **It is illegal to intentionally release any refrigerants, including the alternatives like HFCs (for example, R-410A).**
14. The Contractor must maintain all records pertaining to ODC's removal, addition, loss, leak rate calculations, and disposal. All applicable Air Force, EPA, state and local guidelines must be followed. A list of equipment location, amounts of refrigerant contained and type must be kept. Ozone Depleting Substances (ODSs). Venting of ODSs into the atmosphere is in violation of Public Law. At no time shall the Contractor knowingly vent or release ODSs. (AFI 32-7040)

## Hydrochlorofluorocarbons

Hydrochlorofluorocarbons, or HCFCs, are chemicals that are mainly used as refrigerants in the air-conditioning and refrigeration industries. Unfortunately, releases of HCFCs damage the ozone layer, which shields the Earth from harmful ultraviolet radiation and are greenhouse gases. The United States is one of more than 195 countries to phase out the manufacture of ozone-depleting substances and find alternatives.

## Phaseout of HCFC-22 and HCFC-142b

HCFC-22 (or R-22) is often used in air-conditioning and refrigeration equipment. HCFC-142b is also used as a refrigerant, often as a component of a blend. It had also been used for foam blowing or as a propellant in aerosol cans. These two HCFCs are being phased out according to the following schedule:

### January 1, 2010

Ban on production, import and use of HCFC-22 and HCFC-142b except for on-going servicing needs of existing equipment

### January 1, 2020

Ban on remaining production and import of HCFC-22 and HCFC-142b

After 2020, the servicing of systems that use R-22 or blends containing HCFC-22 or HCFC-142b will rely on recovered or stockpiled quantities. It is difficult to predict when these supplies will run out. Supplies may be available until almost all equipment containing R-22 or R-142b is retired. However, in the future, supplies will be more limited and costs of HCFCs will likely rise.



EPA Ozone Web Site  
<http://www.epa.gov/ozone/>  
EPA Stratospheric Ozone Information Hotline  
1.800.296.1996

ENERGY STAR Web Site  
<http://www.energystar.gov/>

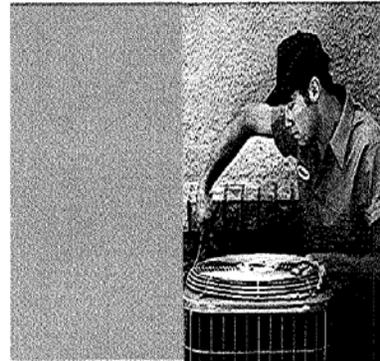
U.S. Environmental Protection Agency  
Mail Code 6205J  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460-0001

EPA-430-F-09-081

#### Disclaimer:

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**What Technicians and Contractors Need to Know About Phasing Out HCFC Refrigerants to Protect the Ozone Layer**





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