



NYU Safety Policy Manual

Subject: **OZONE DEPLETING SUBSTANCES**

Policy No. 116

APPLICATION

All New York University academic, commercial and residential facilities.

PURPOSE

New York University has established a policy to comply with the regulations and requirements for the reduction and management of ozone depleting substances (ODS) in their facilities. Title VI of the Clean Air Act Amendments contain specific requirements on the management and eventual elimination of ODS, and the U.S. Environmental Protection Agency (EPA) has issued requirements and guidance for facilities in 40 CFR Part 82. As a user and not a producer of ODS, only portions of the regulations apply to NYU. The purpose of this Policy is to outline specific requirements for compliance with the applicable portions of the regulations, and to provide guidance in the eventual phase-out and elimination of the use of ODS at NYU.

POLICY AND GENERAL INFORMATION

1.0 Scope

This policy covers the use and maintenance of ozone depleting chemicals at New York University by University personnel as well as outside contractors who may maintain equipment.

2.0 Definitions

Appliance - Any device, which contains and uses a Class I or Class II substance as a refrigerant and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller or freezer.

Certified Refrigerant Recovery or Recycling Equipment - Any equipment certified by an approved equipment testing organization to meet the EPA standards (40 CFR 82.158), or equipment manufactured before November 15, 1993 that meets EPA standards (40 CFR 82.158).

Ozone Depleting Substance (ODS) - Chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and other halogenated chemicals that have been found to contribute to the depletion of the stratospheric ozone layer and are of worldwide environmental concern. See Table 1 for a complete list of Class I and Class II controlled substances scheduled for phase-out by the EPA.

3.0 Responsibilities

3.1 *Environmental Services* shall:

- Review applicable regulations and update policy as needed;
- Provide technical assistance in reviewing proposed replacement materials for fire suppression systems;

ISSUE DATE	REPLACES	ORIGINATOR	APPROVAL
11/05	08/02	ENVIRONMENTAL SERVICES	SR. VP OPERATIONS AND ADMINISTRATION

- Maintain copies of records from facility departments and Information Technology Services regarding ODS-containing equipment inventory and technician training certifications.

3.2 *Facility Depts. (Central Refrigeration Plant, Heating, Ventilation and Air Conditioning Shop and Housing Refrigeration Engineers) shall:*

- Maintain an inventory of equipment that uses ODS, the type of ODS, and provide Environmental Services with a copy of the inventory. Household refrigerators, freezers and window air conditioners may be excluded from the inventory. Any changes to the inventory shall be recorded and a copy provided to Environmental Services;
- Ensure that all technicians, whether NYU employees or outside contractors, who perform maintenance, service, repair or disposal activities that could reasonably be expected to release refrigerants be certified through a US EPA approved training program;
- Track leak rates for all refrigeration equipment with more than 50 pounds of charge and maintain records;
- Ensure prompt repair of substantial leaks in air conditioning and refrigeration equipment with charges greater than 50 pounds;
- Prohibit venting and ensure proper evacuation of appliances using certified recovery equipment prior to maintenance, repair or disposal of equipment containing ODS;
- Ensure that equipment owned and operated by NYU for refrigerant recovery is certified and complies with EPA requirements.
- Using the EPA's Refrigerant Recovery and Recycling Device Acquisition Certification Form, certify to EPA that servicing of air conditioning and refrigeration equipment is performed at NYU. See Appendix A for a copy of the form. Only an initial notification is required, and it does not need to be updated.
- Maintain records of technician certification, leak rates, certification of recycling equipment, disposal of refrigerant and service records for equipment containing more than a 50-pound charge;
- Prepare and implement a plan to phase-out equipment which uses ODS.

3.3 *Information Technology Services shall:*

- Maintain a list of areas where halon fire suppression equipment is used, and keep an inventory of the amount and type of halon used at each location. Provide Environmental Services with a copy, and update of any changes as they occur;
- Ensure that all technicians who test, maintain, service, repair or dispose of halon-containing equipment be trained, as required by EPA, regarding halon emissions reduction;
- Prohibit venting of halon equipment;
- Dispose of Halon and Halon-containing equipment by sending to a recycler and/or manufacturer operating in accordance with NFPA 10 and NFPA 12A standards, and maintain disposal records;

- Ensure that halon-containing equipment be maintained to prevent failure and release of halon to the atmosphere, until the eventual disposal of halon-containing equipment;
- Implement a plan to phase-out the use of halon based fire suppression equipment.

3.4 *Purchasing Department shall*

- Ensure that purchase orders for outside vendors providing service on refrigeration equipment stipulate that both technicians and reclamation equipment be certified. Purchase orders for service on fire suppression equipment containing halon shall stipulate that work be performed by individuals who have been trained in accordance with EPA requirements;
- Purchase orders shall stipulate that reclamation and recycling equipment used at NYU shall meet the EPA certification requirements, and that reclaimers shall participate in third-party reclaimer certification programs.

4.0 Prohibition on Venting

Under 40 CFR Part 82, individuals are prohibited from knowingly venting ODS into the atmosphere while maintaining, servicing, repairing or disposing of air-conditioning or refrigeration equipment, or halon-containing equipment. Exceptions to this prohibition include releases of “de minimis” quantities of refrigerant; refrigerant emitted in the normal course of operation as opposed to during maintenance, service and repair; releases of CFCs and HCFCs that are not used as refrigerants; and small releases that result from purging hoses.

5.0 Service Practice Requirements

All NYU refrigeration technicians and all outside vendors who service refrigeration equipment are required to comply with the following:

5.1 *Evacuation Requirements*

Air-conditioning and refrigeration equipment must be evacuated to EPA-required vacuum levels prior to opening equipment. If the equipment used to evacuate the system was manufactured on, or after, November 15, 1993, the equipment must be certified by an EPA-approved equipment testing organization. Persons who simply add refrigerant (top-off) to appliances are not required to evacuate systems.

5.2 *Reclamation Requirement*

EPA has established that refrigerant recovered and/or recycled can be returned to the same system or other systems owned by the same person without restriction. If refrigerant changes ownership, however, that refrigerant must be reclaimed.

6.0 Equipment Certification*6.1 Certification by Owners*

EPA requires that persons servicing or disposing of air-conditioning and refrigeration equipment certify to the EPA Region II Office that they have acquired recovery or recycling equipment, and that they are complying with the applicable requirements of this rule. A special form is to be completed and signed by an authorized NYU representative, a copy of which is provided in Appendix A. This form does not need to be updated with each new equipment acquisition.

6.2 Equipment Manufactured After November 15, 1993

Equipment used to recycle or recover ODS must be certified if the equipment was manufactured on, or after, November 15, 1993. Certified equipment can be identified by a label reading "This equipment has been certified by ARI/UL to meet EPA's minimum requirements for use.". If the label cannot be found or read, lists of certified equipment may be obtained by contacting ARI (Air-Conditioning and Refrigeration Institute) at (703) 524-8800 and Underwriters Laboratory (UL) at (708) 272-8800 ext.42371.

6.3 Equipment Manufactured Before November 15, 1993

Recovery/recycling equipment manufactured before November 15, 1993 may be grandfathered if it meets the standards detailed in 40 CFR 82.158.

7.0 Tracking Leaks

Facility Depts. and Information Technology Services with equipment having refrigerant charges of greater than 50 pounds are required to maintain records indicating the quantity of refrigerant added to their equipment during servicing and the maintenance procedures. These records must be available for review by outside parties, including government inspectors.

Based on the quantities of materials added to equipment, leak rates are to be calculated. If a leak rate of 15% or greater is detected, the leak must be repaired within 30 days of discovery.

8.0 Technician Certification*8.1 Refrigerant-Containing Equipment*

All technicians who service, repair, recover and/or dispose of regulated refrigerants at NYU must be certified through a USEPA-approved training program. Proper training must also be received for the equipment being used. Outside contractors must provide proof of the proper certifications for their personnel.

8.2 Halon-Containing Equipment

Technicians who work on halon-containing equipment must be trained regarding halon emissions reduction.

9.0 Outside Services

9.1 *Certified Technicians*

- All outside contractors who service or repair air-conditioning or refrigeration equipment shall be required to use certified technicians. Facility Depts. shall obtain proof of certifications prior to the service or repair work.
- Information Technologies Services shall require that all outside service technicians for halon-containing equipment have required EPA Training for halon emissions reduction.

9.2 *Reclaimers/Recyclers*

- Facility Depts. must ensure that contracted services that reclaim and recycle refrigerants must be on the EPA list of approved reclaimers, available through the EPA Hotline (800) 296-1996. In order to be on the EPA approved list, reclaimers must certify to EPA, in writing, that they release no more than 1.5 percent of the refrigerant during the reclamation process. They must also certify that wastes are disposed of according to EPA requirements.
- ITS shall ensure that halon is disposed of by sending it to a recycler operating in accordance with NFPA 10 and NFPA 12A standards.
- ITS shall ensure that halon-containing equipment is disposed of by sending it for halon recovery to a manufacturer operating in accordance with NFPA 10 and NFPA 12A standards.

10. Disposal Requirements

- All central air-conditioning equipment, chillers, fire suppression systems, and other major ODS-containing equipment must have the ODS recovered prior to dismantling.
- Smaller units that can enter the waste-stream intact, such as window air-conditioners, refrigerators and freezers, shall have the refrigerant recovered prior to waste pick-up. Private waste hauling companies contracted by NYU require that refrigerant be removed from this small equipment and that documentation be provided before the waste will be accepted for disposal. Copies of this documentation shall be maintained by the Facility Depts. Labels shall be affixed to the units to be disposed following removal of refrigerant. Labels are available through Environmental Services, and a copy of the label is provided in Appendix B.
- Certain buildings that use municipal waste services must notify the Sanitation Department of any refrigerant-containing equipment to be removed as part of the waste stream. The Sanitation Department is then responsible for the proper removal and final disposition of refrigerant.
- Disposal of Halon and Halon-containing equipment shall be through recyclers and manufacturers operating in accordance with NFPA 10 and NFPA 12A standards.

11. Recordkeeping

- All records relating to ODS shall be maintained for a minimum of three years.
- Refrigeration Technicians are required to keep a copy of their certification at their place of business.

- For equipment containing 50 or more pounds of refrigerant, all service records must be maintained and quantity of refrigerant added must be tracked.
- A copy of the Certification by Owner to EPA regarding Refrigerant Recovery/Recycling Device Acquisition shall be maintained.

12. Procurement

All CFCs are controlled substances at NYU and require special approval before they may be purchased. New purchases must be approved by Environmental Services. All new refrigeration equipment must be CFC-free.

13. Reduction Goals

NYU will reduce its use and releases of the target chemicals through a variety of techniques. These include:

- Replace CFC equipment with non-CFC equipment;
- Convert CFC equipment to non-CFC alternatives, when feasible;
- Maintain existing equipment and repair any leaks detected;
- Clean and reuse CFCs directly back in equipment;
- Ensure only certified technicians work on CFC equipment;
- Prohibit acquisition of most new CFC equipment;
- Restrict purchases and use of CFC supplies

TABLE 1 – List of Class I and Class II Ozone Depleting Substances

	CLASS I	
Group I	Group II	Group III
CFC-11	Halon 1211	CFC-13
CFC-12	Halon 1301	CFC-111
CFC-113	Halon 2402	CFC-211
CFC-114		CFC-212
CFC-115		CFC-213
R-500		CFC-214
R-502		CFC-215
	Group IV	CFC-216
	Carbon Tetrachloride	CFC-217
Group V	Group VI	Group VII
1,1,1-trichloroethane	Methyl Bromide	HBFCs
	CLASS II	
HCFC-21	HCFC-142	HCFC-242
HCFC-22	HCFC-221	HCFC-243
HCFC-31	HCFC-223	HCFC-244
HCFC-121	HCFC-224	HCFC-252
HCFC-122	HCFC-225	HCFC-253
HCFC-123	HCFC-226	HCFC-261
HCFC-131	HCFC-231	HCFC-262
HCFC-132	HCFC-234	HCFC-271
HCFC-133	HCFC-235	
HCFC-141	HCFC-241	

Appendix A

EPA Refrigerant Recovery or Recycling Device Acquisition Certification Form

Appendix B

Sample Label for Disposal of Window Air Conditioners and Refrigerators

Following Refrigerant Removal

REFRIGERANT EVACUATION CERTIFICATION TAG

CONTAINS NO CFCs

THIS UNIT COMPLIES WITH SECTION 608 OF THE CLEAN AIR ACT

DATE OF EVACUATION: _____

REPLACEMENT REFRIGERANT TYPE: _____

REPLACEMENT OIL USED: _____

UNIT EVACUATED BY: _____
CERTIFIED TECHNICIAN

SERVICING COMPANY: _____

ADDRESS: _____

PHONE: _____

OWNER: NEW YORK UNIVERSITY

70 WASHINGTON SQUARE SOUTH
NEW YORK, NY 10012
(212) 998-1212