

## Chemical Waste Fact Sheet— No. 2

### Gas Cylinder Returns

As with most hazardous wastes, the best way to manage gas cylinders, canisters and cartridges is to avoid purchasing surplus amounts. This can best be accomplished by buying only what you need, by using all you buy, by emptying cylinders completely through routine use, and by not purchasing duplicate cylinders for those that are partially full in your inventory.

There are two types of cylinders used on campus:

1. Cylinders supplied by industrial gas vendors (containing argon, carbon dioxide, helium, nitrogen, oxygen, air and other common gases) usually in cylinders with screw-top valve covers.
2. Specialty gases, supplied by various vendors, commonly in lecture bottles (usually 12-15 inches long and 2 inches in diameter).

Group 1 usually are provided on a rental basis and have a deposit on them. These can be returned through Central Stores to the vendor. Group 2 are usually sold outright but may in most cases be returned to the vendor at a cost of \$0-250. If the cylinder is disposed of through a chemical waste contractor it will typically cost \$100-1000 for disposal. Lecture bottles purchased through the campus vendor (currently, M. G. Industries) can be returned at no cost, as specified in the University's contract with the vendor.

If a speciality gas is desired that is not available through the campus vendor, the best solution is to rent the next larger size cylinder, rather than purchase a lecture bottle that may cost several hundred dollars to dispose later, even if empty. Although vendor's designations vary for the next larger size, these cylinders are generally about 20 inches long and 4 inches in diameter. Although these cylinders are provided on a rental basis, they almost always cost less than the same product delivered in a lecture bottle. The cylinders contain more product but may be returned even if they are not empty. Alternatively, you may be able to work with the vendor to purchase partially filled cylinders if you don't need full ones. This is the most economical and environmentally sound choice when using small quantities of gases. For more information contact your customer service representative.

If you feel that lecture bottles are your only alternative and non-rental cylinders must be used, see "Waste Minimization Fact Sheet—No. 12: Purchasing Guidelines for Lecture Bottles."

For disposal, we recommend the following steps be taken:

1. Contact the manufacturer or vendor of the gas cylinder in question to see if it can be returned. Even if a vendor is not on the list on reverse, they might accept cylinder returns.
2. Follow instructions given by the vendor to ship the cylinder. They can provide the required shipping information. Call the Chemical Safety Section (4-7213) if you need assistance. Addresses for several of the more common vendors appear on the reverse side of this bulletin.
3. If the manufacturer or vendor will not allow for return, consult "Chemical Waste Fact Sheet—No. 4: Disposal Options for Lecture Bottles."

# Vendors' Addresses

The following companies accept returns of gas cylinders (as of June 1, 1997):

Name, Address, Phone	Typical Return Charge			Company picks up? Must be shipped back!	Comments	Name, Address, Phone	Typical Return Charge			Company picks up? Must be shipped back!	Comments
	0	No	Yes				0	Yes	No		
Air Products 12721 S. Wentworth Chicago, IL 60628 773/785-3000 (Wanda)	0	No	Yes			MG Industries c/o S.J. Smith Welding Bondville, IL 61815 217/863-2223 -Glenn Smith	0	Yes	No		If poison, will arrange shipment.
Aldrich P.O. Box 355 Milwaukee, WI 53233 800/558-9160 - Cust Ser	\$25	No	Yes		Empties only less than 6 months old. Need special form.	Morton International, Inc. Shipping Department 148 Andover St. Danvers, MA 01923 508/750-9489 - Cheryl Fax: 508/750-4298	\$250	No	Yes		Must get authorization. If purchased after 1989, no charge.
American Environmental Instruments 4037 Darling Ct., Suite A Lilburn, GA 30247 800/842-1088	0	No	Yes		Send empty containers by UPS with no haz labels.	Ozark Mahoning 5101 W. 21st St. Tulsa, OK 74107 918/583-0851 - Greg Ward	0	No	Yes		Attn: Dale Fisher
Cambridge Isotope Labs 20 Commerce Way Woburn, MA 01801 508/749-7068	0	No	Yes		Write "for disposal" Only accept returns on case by case basis.	PCR Research Chemicals P.O. Box 1466 Gainesville, FL 32600 352/376-8246x323	\$100	No	Yes		Contact Sherry Evers Rock for preapproval forms. Charge applies if older than 1 year.
Canaan Scientific—see American Environmental Instruments						Pennwalt - see Ozark Mahoning					
Farchan Laboratories 2603 NW 74th Place Gainesville, FL 32606 352/378-5864	0	No	Yes			Pfaltz and Bauer 800/635-8842 - Doug Hughes	0	No	Yes		Only accept on case by case basis. Contact tech services first.
Matheson Manhattan Road & Richards St. P.O. Box 96 Joliet, IL 60434 815/727-4848 - John Kraus Fax: 815/727-1676	\$40	No	Yes		Will accept gases they still market. Purchase Order # required to process return request.	Scientific Gas Products - see Scott Specialty Gases					
Merck Sharp Dohme Isotopes—see Cambridge Isotope Labs						Scott Specialty Gases 1290 Combermerb Street Troy, MI 48083 810/589-2950 (MI Plant) Contact: 630/860-1824 (Marty)	0	No	Yes		Mark "empty".
						Spectra Gases In. 80 Industrial Dr. Alpha, NJ 08865 800/932-0624	0	No	Yes		Send collect.

## Other Disposal

CFC Reclamation 367-3766 - will buy most freons

Don't accept cylinders back (as of June 1, 1997):

AGA Gas—217/443-0204

Amersham—847/593-6300

Atomergic Chemicals Corp.—516/694-9000

AZCO (formerly Texas Alkyls)—800/828-7929

Cerac—414/289-9800

Fluka—800/358-5287

ICN Biomedicals—800/854-0530

Monsanto Co.—800/635-8842

Phillips 66—800/858-4327

Pierce Chemical—800/874-3723

Praxair (formerly Linde—Union Carbide)

—217/367-1139 (local vendor: Depke)