

# Cylinder and Compressed Gas Management Services

*Your First Choice for  
Environmental Management.*



Photo courtesy of Praxair, Inc., Danbury, CT 06810

**CleanHarbors®**



# Safe Cylinder Management.

## Proven Leadership in Cylinder Management

We have managed thousands of cylinder disposal projects throughout North America and abroad. From the removal of a single lecture bottle to large-scale multiphase cylinder remediation projects, companies trust our technical knowledge to dispose of their cylinders with the highest regard to health and safety.

With more than 170 service locations and over 50 company-owned and operated waste management facilities in the United States and Canada that cover a broad range of disposal technologies, Clean Harbors is your single source for the safe, efficient management of all waste streams. Our services include hazardous and non-hazardous waste transportation and disposal, laboratory chemical packing, emergency response, field services, and industrial services.



Since 1980, Clean Harbors has taken the lead in identifying the most cost-effective, environmentally sound options for waste management and environmental services.

Choose Clean Harbors for the best in flexibility, efficiency, and excellent service.

## Experience and Technical Knowledge

Governmental agencies, learning institutions, and public and private companies trust Clean Harbors to handle their cylinder disposal needs because they know we have the experience to get the job done right, while adhering to strict regulatory statutes and health and safety standards.

Each cylinder brought into the Clean Harbors network is evaluated by either our CleanPack® chemists or cylinder specialists. This critical evaluation ensures that each cylinder meets the criteria of all regulatory agencies transportable packages and is the first step in properly removing waste or recyclable cylinders from customer sites. Clean Harbors then transports these cylinders to our state-of-the-art cylinder processing facilities, ensuring that compressed and packaged gases are managed using the safest and most compliant technologies in the industry today.

For cylinders that are leaking, damaged, contain unknown material, or are inherently unstable and cannot be safely shipped, Clean Harbors mobilizes a team of cylinder specialists to the location. These specialists will assess the situation and identify, analyze, overpack, transfer, or stabilize the material, depending upon what the unique situation requires.

Clean Harbors' cylinder teams are made up of experienced, highly trained specialists who meet rigid personnel qualifications. Utilizing state-of -the-art personal protective, project, and safety equipment, Clean Harbors' cylinder teams provide the solution, no matter what the challenge.

Clean Harbors routinely solves environmental problems throughout the United States, Canada, and Puerto Rico. Our experience, technical and operational resources, and compliance history uniquely qualify us to provide our clients with the resolution to their cylinder problems.

# Services at a Glance

## Cylinder Training Programs

Giving your employees the tools they need to work safely and efficiently

## Facility-Based Cylinder Mgmt.

State-of-the-art treatment technologies to dispose of your waste cylinders

## On-Site Packaging and Disposal

Cylinder evaluation, packaging, and transportation to our fully permitted TSDFs

## Unknown Sampling and Identification

Providing the information needed to ship unknown cylinders safely

## Damaged/Defective Cylinders

On-site management of damaged or defective cylinders not meeting 49CFR requirements

## Portable/Fixed Tanks

Providing services for facility-based tanks and vessels

## Site Remediation and Containment

Response to various cylinder remediation scenarios

## "High-Hazard" Cylinders

Cylinders with added hazards besides chemical exposure and pressure

## Benefit from Our Full Range of Services

### Facility-Based Cylinder Management

- Hydrolysis and advanced hydrolysis
- Incineration technologies
- Multiple scrubbing systems and fixed air monitoring
- Recycling options available

### On-Site Packaging and Disposal

- Evaluation performed on every cylinder
- All manifesting and associated paperwork completed by our CleanPack® chemists or cylinder specialists
- Mobile Cylinder Response Trailer, a standalone/self-contained unit capable of managing virtually any compressed gas cylinder safely while on a client's site, handling emergency response and containment, on-site processing, sampling unknowns, and packaging and disposal

### Unknown Sampling and Identification

- Mass spectrometer-based analysis
- Process specific sampling manifolds
- Experience in managing unknown cylinders
- On-site sampling capabilities

### Damaged/Defective Cylinders

- High/low pressure cylinder overpacks
- Portable cylinder management equipment including: gas flares, high flow/high vacuum scrubbers, cylinder tapping devices, remote tapping units, remote valve openers/manifolds, and process reactors

### "High-Hazard" Cylinders

- Facility-based management of hydrogen cyanide, anhydrous
- Pentaborane and higher borane complexes
- Tetrafluorohydrazine
- Hydrogen fluoride and other dissociating compounds
- Mustard gas and other chemical warfare agents
- Chlorine trifluoride and hypergolic mixtures

### Site Remediation and Containment

- High-pressure overpacks and "Mother" cylinders
- Chlorine "A," "B," and "C" containment kits
- On-site gas flaring
- Transfer and gas-scrubbing equipment
- Environmental enclosures

### Portable/Fixed Tanks

- Highly trained personnel for tanks/vessels that are leaking, bulging, fire damaged, excessively corroded, or have non-operable valves
- Limiting potential exposures to your employees and the community
- Limiting liabilities to your employees and the community

### Cylinder Training Programs

- Compressed Gas Emergency Response Training (CGERT)
- Compressed Gas Safety Awareness Training (CGSA)
- Chlorine Gas Emergency Response Training (CGER)

## Clean Harbors

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*Commitment. Leadership. Confidence.*

Clean Harbors is North America's leading provider of environmental, energy and industrial services serving over 50,000 customers, including a majority of Fortune 500 companies, thousands of smaller private entities and numerous federal, state, provincial and local governmental agencies.

Within Clean Harbors Environmental Services, the Company offers a broad range of hazardous material management and disposal services, including the collection, packaging, recycling, treatment and disposal of hazardous and non-hazardous waste. We also provide a wide variety of environmental cleanup services on customer sites or other locations on a scheduled or emergency response basis.

Within Clean Harbors Energy and Industrial Services, the Company provides industrial and specialty services, such as high-pressure and chemical cleaning, catalyst handling, decoking, material processing and industrial lodging services to refineries, chemical plants, pulp and paper mills, and other industrial facilities.

We also provide exploration and directional boring services to the energy sector serving oil and gas exploration, production, and power generation.

Clean Harbors has more than 175 locations, including over 50 waste management facilities throughout North America in 37 U.S. states, seven Canadian provinces, Mexico and Puerto Rico. The Company also operates international locations in Bulgaria, China, Sweden, Singapore, Thailand and the United Kingdom.

Founded in 1980, Clean Harbors has grown to be the leading and most trusted environmental, energy and industrial services, and waste management company, fully committed to preserving natural resources, serving local communities, and adhering to strict government regulations.

Look to Clean Harbors to handle every aspect of your environmental, energy and industrial services management program.

### Environmental Services

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- Waste Disposal
- Chemical Packing
- Transformer Services
- Material & Supplies Sales
- Emergency Response
- Recycling Services
- Field Services
- Apollo Onsite Services
- Household Hazardous Waste

### Energy & Industrial Services

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- Industrial Services
- Directional Boring
- Filtration and Treatment Services
- Rental Services
- Exploration Services
- Lodging Services
- Health and Safety Services



### For Cylinder and Compressed Gas Management Services

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Call 800.282.0058

### Or visit the Web at

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[www.cleanharbors.com](http://www.cleanharbors.com)

**Corporate Headquarters**  
42 Longwater Drive  
P.O. Box 9149  
Norwell, MA 02061-9149  
781.792.5000  
800.282.0058

