UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

October 2, 2000

Mr. Jay Chung, Director in Sales
OMEGA Cleaning Equipment, Inc.
215-05 Northern Blvd.,
Bayside, NY 11361

re: Hoyt Hydrocarbon dry cleaning machine

Dear Mr. Chung:

The letter is in response to your correspondence dated August 7, 2000 to Mr. Steve Rapp, Chief of the Air Permits program of EPA New England regarding hydrocarbon dry cleaning equipment. Please note that this letter was redirected to the Hazardous Waste program for review and response. In your letter you requested EPA's opinion on the Hoyt Hydrocarbon dry cleaning machine which uses the ExxonMobil chemical DF-2000. Included with your request were several letters from state environmental agencies which addressed regulations for dry cleaning wastes resulting from the use of the DF-2000 solvent in dry cleaning operations, also included was an MSDS sheet for DF-2000. In addition, you also requested guidance regarding hydrocarbon waste disposal requirements and the applicability of the Massachusetts hazardous waste regulations to certain wastes from the dry cleaning process. Please note that the State of Massachusetts, in accordance with Section 3006 of the Resource Conservation and Recovery Act (RCRA), is authorized to administer and enforce the base RCRA program in lieu of the federal program. In particular, Massachusetts has regulatory authority regarding solid and hazardous waste determinations and waste disposal requirements. Therefore, we suggest that you further consult with the Massachusetts Department of Environmental Protection (MADEP) regarding applicable state regulations for waste disposal and any other applicable hazardous waste regulations.

While we are not in a position to provide you with an opinion on the Hoyt machine we can provide you with some guidance regarding Federal environmental regulations for hazardous waste and potentially applicable regulations for air pollutants with respect to dry cleaning operations. The Federal hazardous waste regulations are found at 40 CFR Part 260 through 279. 40 CFR Part 262 lists the requirements for hazardous waste generators. The generator of a waste is responsible for determining whether the waste is hazardous (see 40 CFR 262.11). There are two ways that a waste is determined to be hazardous; either the waste exhibits a characteristic of a hazardous waste as defined in 40 CFR 261.21, 261.22, 261.23, and 261.24, or it is identified and

specifically listed as a hazardous waste in 40 CFR 261.31, 261.32, and 261.33. Please note that the levels of chemicals listed on an MSDS are not appropriate values to use when making a hazardous waste determination. An MSDS only reports the presence of a hazardous constituent at a concentration level of 1% (the equivalent of 10,000 ppm) or greater. This level is well above any maximum concentration level that could cause a waste to be hazardous due to a characteristic (see 40 CFR § 261.24) using the Toxicity Characteristic Leaching Procedure (TCLP). Therefore, it is unlikely that a generator could rely on knowledge to determine whether or not this product is a hazardous waste after use. Since it is the generator's responsibility to determine whether or not a waste they produce is hazardous, we recommend that testing be done by the generator, in this case the dry cleaning operator, to determine the presence of constituents which may cause the waste to be hazardous.

Under the Air Program EPA promulgated National Emissions Standards for Hazardous Air Pollutants (NESHAPs) for perchloroethylene drycleaners on September 22, 1993. EPA has also listed drycleaning (petroleum solvent) for regulation on its source category list and may develop regulations for major sources of hazardous air pollutants (HAPs). Enclosed please find a fact sheet that summarizes the regulations for hydrocarbon drycleaners developed by EPA. In addition, you can find other useful information about hydrocarbon drycleaners on EPA's website at http://www.epa.gov/dfe/garment/garment.html. We also recommend that you consult with the MADEP regarding any applicable state air permit regulations.

If you have any questions regarding this response, please do not hesitate to contact Sharon Leitch, in the Hazardous Waste Program Unit, at (617)918-1647.

Sincerely,

Gary B. Gosbee

for Edward K. McSweeney, Associate Director
Waste Policy

cc: G. Gosbee, Chief, Hazardous Waste Program Unit, EPA
K. Rota, Chief RCRA Enforcement Unit, EPA
J. Fowley, Atty., ORC-EPA
S. Rapp, Chief, Air Permits Program, EPA
D. Koopman, Air Technical Unit, EPA
J. Miller, Chief, Waste Branch, MADEP
J. Duclos, Supervisor, Hazardous Waste Compliance Section, NHDES
D. Sattler, Supervisor, WEED, CTDEP
L. Hellested, Chief, Waste Management, RIDEM
S. Ladner, Supervisor, Licensing Unit, MEDEP
P. Marshall, Chief, Hazardous Materials Management Division, VTDEC

enclosure

United States
Environmental Protection
Agency

Pollution Prevention
and Toxics (7406)

EPA 744-F-99-005
May 1999

Design for the Environment
Garment and Textile Care Program Fact Sheet

What is Design for the Environment?

EPA's Design for the Environment (DfE) Program is a voluntary initiative that forges partnerships with various stakeholder groups in an effort to:

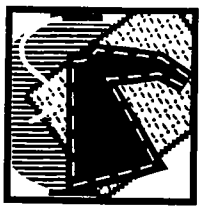
- Incorporate environmental concerns into the traditional decision-making parameters of the business world: 'cost' and 'performance.'
- Build incentives for behavior change to encourage continuous environmental improvement.

To accomplish these goals, the program utilizes EPA expertise and leadership to compare the relative environmental and human health risks, performance, and cost tradeoffs of traditional and newer technologies. DfE disseminates information on its work to all interested parties and also assists businesses to implement the new technologies identified through the program.

The program currently has cooperative partnerships with:

- Industry
- Academia
- Environmental and Public Interest Groups
- Labor Unions
  Research Organizations
  Government Purchasing Agencies
- Professional Institutions and Trade Associations

List of Major Federal Regulations and Standards Affecting Petroleum Cleaners



In general, on a nationwide basis, petroleum drycleaners provide their services primarily to large industrial, commercial, and institutional customers. Consequently, petroleum drycleaning establishments tend to be larger operations relative to the drycleaners who cater to a residential clientele, i.e., the neighborhood cleaners. However, many smaller cleaners are now converting from perchloroethylene to petroleum processes. Because petroleum drycleaners presently form a distinct sector (due to size, customer-type, and solvent-type) within the garment and textile care industry, these operations are subject to special Federal and State regulatory requirements.

This Fact Sheet identifies some of the major Federal environmental, health, and safety requirements that apply to petroleum drycleaning operations. The U.S. Environmental Protection Agency (EPA) administers the Federal environmental protection requirements and the U.S. Occupational Safety and Health Administration (OSHA) administers the Federal worker health and safety requirements. The National Institute of Occupational Safety and Health (NIOSH) has established operational recommendations in the form of guidance documents. NIOSH is a Federal institute that provides research and technical support to OSHA and other Federal agencies. Other Federal Agencies may have regulations that apply to petroleum solvent cleaners and they are not covered in this Fact Sheet.

Compliance with State-Level Requirements. Most States have adopted the Federal regulations and standards into their State-level regulatory codes and are therefore authorized to carry out primary implementation and enforcement responsibilities for the Federal EPA and OSHA requirements. For example, the States responsible for implementing Federal OSHA requirements are called "State Plan States." Beyond the Federal requirements, many State environmental control and public health agencies have adopted regulations and standards that are stricter than the Federal requirements. This document does not address specific State requirements for petroleum drycleaners. Petroleum drycleaners must be knowledgeable of, and in compliance with, the regulations and standards of individual States.

Federal Environmental Protection Regulations and Standards

EPA regulations apply to petroleum drycleaners with respect to: 1) hazardous waste handling and disposal; 2) ozone and volatile organic compound (VOC) air emissions; and 3) spill prevention and control. The EPA regulations outlined below, and related guidance documents, can be accessed on specific EPA web sites as indicated.

DISCLAIMER – This document provides a listing and brief description of only the current MAJOR federal environmental and worker safety regulations that affect petroleum drycleaning operations. It is not intended to be an inclusive listing of every U.S. EPA or U.S. OSHA regulation that may apply to petroleum drycleaning establishments. Further, many States have developed additional regulatory requirements that may apply to petroleum drycleaning operations. Federal and State regulatory requirements may change over time. Petroleum drycleaners must comply with all currently applicable Federal and State regulations and standards. To stay abreast of changes in regulations and standards, and to precisely determine which requirements apply to your specific operation, you should contact your regional EPA and OSHA office (listed at the end of this document) and officials of your state environmental control or public health agency.

Hazardous Waste Handling and Disposal – Under the Federal Resource Conservation and Recovery Act (RCRA), a petroleum drycleaner must comply with various hazardous waste regulations if the particular solvent used is "ignitable." A solvent is ignitable if its flashpoint is lower than 140 degrees Fahrenheit (60 degrees Centigrade). If the solvent is ignitable, then the extent of hazardous waste regulation is dependent upon the amount of hazardous waste that a drycleaner generates. The EPA hazardous waste regulations are located in Title 40 of the *Code of Federal Regulations (CFR)*, Part 260 through Part 279. In general, these regulations govern the following aspects of hazardous waste management: use of the off-site waste shipment manifest form; packaging and labeling; on-site storage; recycling and reuse; off-site waste transport requirements; and recycling/disposal facility selection. Materials that commonly qualify as hazardous petroleum drycleaning wastes include, but are not limited to: filter casings; still bottoms; separator water; partially empty solvent containers or drums; and spotting board residues. Regulatory, guidance, and other information pertaining to hazardous waste management can be accessed on the EPA web site at: www.epa.gov/epaoswer/osw/hazwaste.htm.

New Source Performance Standards (NSPS) – Established pursuant to the Federal Clean Air Act (CAA), the NSPS standards serve to ensure that new sources of air pollution meet minimum performance requirements pertaining to equipment and work practices. The NSPS for petroleum drycleaners serves to minimize VOC emissions through application of best demonstrated technologies. A petroleum drycleaner must comply with new source performance standards if the operation has a total manufacturer-rated dryer capacity that is equal to or greater than 84 pounds (38 kilograms) AND the equipment was installed after December 14, 1982. The EPA new source emission standards for petroleum drycleaners are located in Title 40 *CFR* Part 60 Subpart JJJ (40 *CFR* Sections 60.620 through 60.625). In general, these standards specify: allowable dryer types; allowable solvent filters; allowable solvent recovery flow rates; recordkeeping requirements; information posting requirements; and performance testing procedures. Regulatory, guidance, and other information pertaining to NSPS requirements can be accessed on the following EPA web sites: www.epa.gov/oar/oaqps and www.epa.gov/ttn/uatw. Also, the NSPS requirement can be accessed on the EPA web site at: www.epa.gov/docs/epacfr40/chapt-I.info/subch-C/40P0060.

Oil Pollution Prevention Regulation – Pursuant to the Federal Clean Water Act (CWA) and the Oil Pollution Act (OPA), EPA developed the Oil Pollution Prevention Regulation. The regulation is located at Title 40 *CFR* Part 112 and forms the basis of EPA's Oil Spill Prevention, Control, and Countermeasures (SPCC) Program. The goal of the SPCC Program is to prevent oil spills from certain aboveground and underground storage tanks.

A petroleum drycleaner must comply with the Oil Pollution Prevention Regulation if the facility meets the following criteria:

a) has an aboveground petroleum solvent storage capacity of more than 660 gallons in a single tank, an aggregate aboveground storage capacity of more than 1,320 gallons, OR a total underground storage capacity of 42,000 gallons; AND;
b) could reasonably be expected to discharge oil product in harmful quantities into navigable waters of the United States.

Petroleum drycleaners who meet the above criteria must prepare a SPCC Plan. The Plan is required to address the facility's design, operation, and maintenance procedures established to prevent spills from occurring, as well as countermeasures to control, contain, clean up, and mitigate the effects of an oil spill that could affect navigable waters. Regulatory, guidance, and other information pertaining to the Oil Pollution Prevention Regulation and the SPCC Program can be accessed on the EPA web site at: www.epa.gov/oilspill/opprover.htm.

Further, under the CWA, petroleum solvents with a flashpoint of less than 140 degrees Farhenheit (60 degrees Centigrade) may be prohibited from discharge into a public sewer system. A petroleum drycleaner must contact the State environmental control agency for specific requirements governing discharges into public sewer systems.

Control Techniques Guidelines – Unlike perchloroethylene (PCE or perc), petroleum solvents are volatile organic compounds (VOCs). As a result, a Control Techniques Guideline (CTG) was developed by EPA for States and local pollution control agencies to use for regulating solvent emissions from various petroleum drycleaning establishments. The petroleum CTG applies only to petroleum drycleaning operations that use more than 32,500 gallons (123,000 liters) of solvent per year. Petroleum drycleaners that exceed that threshold may need to install a petroleum recovery dryer and adhere to other requirements for filtration and leaks.

A CTG is not mandatory in all situations, nor does it serve as absolute minimum or maximum requirement. In determining how closely to adhere to the EPA CTG guideline, each State or local air pollution control agency evaluates the severity of ozone pollution in a local or regional area and the amount of control necessary to alleviate the problem. A petroleum drycleaner must contact the State environmental control agency or local air pollution control agency to determine exactly how this requirement applies to his/her operation.

The EPA CTG guidance for petroleum solvent is title *Control of Volatile Organic Compound Emissions from Large Petroleum Drycleaners* (EPA 450/3-82-009). This document can be ordered by contacting the National Technical Information Service (NTIS) at the following toll-free number: (800) 553-NTIS.

Underground Storage Tank Regulations -- Under RCRA, a petroleum drycleaner that stores solvent in underground storage tanks (USTs) must comply with Federal and State UST regulations. The Federal UST regulations are located at Title 40 *CFR* Part 280 and require that USTs be protected from corrosion, equipped with devices that prevent spills and overfills, and periodically monitored for leaks. Regulatory, guidance, and other information pertaining to UST requirements can be accessed on the following EPA web site: http://www.epa.gov/swerust1.

Maximum Achievable Control Technology (MACT) Standard – In the near future, as already exists for perchloroethylene drycleaners, EPA may establish a MACT standard for petroleum drycleaners pursuant to authority granted to the EPA under the CAA. The purpose of a MACT standard is to ensure that state-of-the-art technologies are used to control listed hazardous air pollutants (HAPs). This regulation would be more comprehensive and more stringent than the Subpart JJJ NSPS standard discussed above. Regulatory, guidance, and other information pertaining to NSPS requirements can be accessed on the following EPA web sites: www.epa.gov/oar/oaqps and www.epa.gov/ttn/uatw.

Federal Worker Health and Safety Regulations and Standards

Pursuant to the Federal Occupational Safety and Health Act, in addition to the Federal OSHA standards that apply to a broad range of industry types, petroleum drycleaners must also comply with OSHA standards that are specific to those industries that use petroleum solvents. These particular OSHA standards address the following aspects of petroleum drycleaning operations: worker exposure; fire safety; and

protection against bloodborne pathogens. For some petroleum drycleaners, OSHA hazard communication standards may also apply. The OSHA standards outlined below, and related guidance documents, can be accessed on the OSHA web site at: www.osha-slc.gov/SLTC/drycleaning. NOTE: For a petroleum drycleaning facility located in a State Plan State, there may be additional requirements. A list of State Plan States and contacts is located on the OSHA web site at: www.osha.gov/oshdir/states.

Worker Exposure – Those petroleum drycleaners that use Stoddard solvent must comply with the OSHA Permissible Exposure Limit (PEL) for Stoddard solvent listed under petroleum distillates. The PEL for Stoddard solvent was established to protect workers from the health effects resulting from exposure to that substance. The PEL for Stoddard solvent is 500 parts per million (ppm) of contaminated air or 2,000 milligrams per cubic meter (mg/cu-m) of air, as measured by an eight-hour Time-Weighted Average (TWA). The PEL standard applicable to petroleum drycleaners is located at 29 *CFR* Section 1910.1000, Table Z-1.

Fire Safety – Petroleum drycleaners must comply with the OSHA standards for flammable and combustible liquids located at 29 *CFR* Section 1910.106. The OSHA standards for fire protection that may also apply are located at 29 *CFR* Part 1910, Subpart L. OSHA's expert systems, titled *Hazard Awareness Advisor and Fire Safety Advisor,* provide guidance for determining which OSHA standards apply your specific establishment(s). These expert systems can be accessed on the OSHA web site at: www.osha.gov/oshasoft.

Also, as specified in 29 *CFR* Section 1910.106, OSHA requires compliance with National Fire Protection Association (NFPA) Standard No. 32 (Standard for Drycleaning Plants). This guidance document is available on the NFPA web site at: www.nfpa.org. Further, NIOSH has developed non-regulatory guidance addressing the control of fire hazards specific to petroleum drycleaning operations. This guidance document is titled *Control of Fire Hazards in Commercial Drycleaning Shops Using Petroleum-Based Solvents (Hazard Control Guidance No. 21).* This NIOSH guidance document can be accessed on the OSHA web site at: www.osha-slc.gov/SLTC/drycleaning.

Bloodborne Pathogens – Those petroleum drycleaners that provide services to health care facilities, police departments, and fire departments must comply with the OSHA standards for control of bloodborne pathogens. These standards are located at 29 *CFR* Section 1910.1030 and set forth requirements for work practice controls, personal protection equipment, housekeeping procedures and techniques, and establishing and implementing an Exposure Control Plan.

Hazard Communication – If a petroleum drycleaner--in addition to being a purchaser and user of petroleum solvent--is also a distributor, importer, or manufacturer of petroleum solvent, the drycleaner must comply with the OSHA standards for hazard communication. These standards are located at 29 *CFR* Section 1910.1200 and set forth requirements for: establishing and implementing a workplace hazard communication plan; labeling of containers; training employees; and maintaining Material Safety Data Sheets (MSDSs).

For More Information

EPA – EPA officials, located at the Agency's Regional Offices, are available to answer questions pertaining to drycleaning regulatory compliance. You may contact the official in your region as listed below:

Region 1 [Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont]
1 Congress Street, 1100 (SEA)
Boston, MA 02203-2211

Doug Koopman, Compliance
(617) 918-1747, fax: (617) 918-1809
koopman.douglas@epa.gov

Region 2 [New Jersey, New York, Puerto Rico, Virgin Islands]
290 Broadway (see floors and mail codes below for each)
New York, NY 10007-1866

Diane Buxbaum, Drycleaning Project/Compliance Assistance
(2DECA-CAPS) 21st Floor
(212) 637-3919, fax: (212) 637-4035

Carl Plossl, Engineer, RCRA Compliance
(2DECA-RCB) 22nd Floor
(212) 637-4137; fax: (212) 637-4949

Venkata Rao, Air Compliance
(2DECA-ACB) 21st Floor
(212) 637-4053, fax: (212) 637-3998

Region 3 [Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia]
1650 Arch Street (see mail codes below for each)
Philadelphia, PA 19103-2029

Richard Segrave-Daly, Compliance and Drycleaning
Pollution Prevention Business Assistance Center (3RA20)
(800) 228-8711 or (215) 814-5535
Fax: (215) 814-2783
daley.richard@epa.gov

Artra B. Cooper, Enforcement (3AP22)
(215) 814-2096, fax: (215) 814-2114

Region 4 [Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee]
61 Forsyth Street, SW.
Atlanta, GA 30303-3415

Rosalyn Hughes, Compliance
(404) 562-9206, fax: (404) 562-9164

Region 5 [Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin]
77 West Jackson Boulevard
Chicago, IL 60604-3590

John Kelly, Compliance (AR-18J)
(312) 886-4882, fax: (312) 886-5824
kelly.johnj@epa.gov

Region 6 [Arkansas, Louisiana, New Mexico, Oklahoma, Texas]
1445 Ross Avenue (6EN-AA)
Dallas, TX 75202-2733

Mary K. Marusak, Compliance and Enforcement
(214) 665-7598, (214) 665-7446

Region 7 [Iowa, Kansas, Missouri, Nebraska]
726 Minnesota Avenue
Kansas City, KS 66101-2798

Alma Moreno-Lahm, Compliance, Drycleaning Sector Team
(ENSV/ARCM)
(913) 551-5232, fax: (913) 551-5287

Gary Schlicht, Compliance (MACT air rule)
(ARTD/APCO)
(913) 551-7097, fax: (913) 551-7065
E-mail: schlicht.gary@epa.gov

Region 8 [Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming]
999 18th Street
Denver Place, Suite 500
D[illegible]ver, CO 80202-2045
[illegible]i Thomas-Burton, Enforcement/Compliance
(8ENF-T)
(303) 312-6581, fax: (303) 312-6409

Region 9 [Arizona, California, Hawaii, Nevada, American Samoa, Guam]
75 Hawthorne Street
San Francisco, CA 94105
Angela Baranco, Air Division, Compliance Assistance Program
(AIR-6)
(415) 744-1196, fax: (415) 744-1073

Region 10 [Alaska, Idaho, Oregon, Washington]
1200 Sixth Avenue
Seattle, WA 98101
Dan Meyer, Drycleaning Project
(OAQ-107)
(206) 553-4150, fax: (206) 553-0110

OSHA – OSHA officials, located at the Administration's Regional Offices, are available to answer questions pertaining to compliance with worker protection and fire safety requirements. You may contact your regional OSHA office as listed below:

Region 1 [Connecticut, Massachusetts, Maine, N[illegible] Hampshire, Rhode Island, Vermont]
[illegible] Federal Building, Room E340
Boston, MA 02203
(617) 565-9860

Region 2 [New Jersey, New York, Puerto Rico, Virgin Islands]
201 Varick Street, Room 670
New York, NY 10014
(212) 337-2378

Region 3 [District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, West Virginia]
Gateway Building, Suite 2100
3535 Market Street
Philadelphia, PA 19104
(215) 596-1201

Region 4 [Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee]
61 Forsyth Steet, SW
Atlanta, GA 30303
(404) 562-2300

Region 5 [Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin]
230 South Dearborn Street, Room 3244
Chicago, IL 60604
[illegible] 353-2220

Region 6 [Arkansas, Louisiana, New Mexico, Oklahoma, Texas]
525 Griffin Street, Room 602
Dallas, TX
(214) 767-4731

Region 7 [Iowa, Kansas, Missouri, Nebraska]
City Center Square
1100 Main Street, Suite 800
Kansas City, MO 64105
(816) 426-5861

Region 8 [Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming]
1999 Broadway, Suite 1690
Denver, CO 80202-5716
(303) 844-1600

Region 9 [Arizona, California, Guam, Hawaii, Nevada]
71 Stevenson Street, Room 420
San Francisco, CA 94105
(415) 975-4310

Region 10 [Alaska, Idaho, Oregon, Washington]
111 Third Avenue, Suite 715
Seattle, WA 98101-3212
(206) 553-5930

How Can I Get More Information?

Contact EPA's Pollution Prevention Information Center to receive an information packet about EPA's DfE Program, or the Garment and Textile Care Program (GTCP), or to request single copies of DfE documents. A revised DfE Publications List along with these recent GTCP publications are now available:

Cleaner Technologies Substitutes Assessment for Professional Fabricare Processes
(EPA 744-B-98-001)

Cleaner Technologies Substitutes Assessment for Professional Fabricare Processes: SUMMARY
(EPA 744-S-98-001)

Cleaner Technologies Substitutes Assessment for Professional Fabricare Processes: Fact Sheet
(EPA 744-F-98-011)

Frequently Asked Questions About Drycleaning
(EPA 744-K-98-002)

Garment and Textile Care Resource Guide
(EPA 744-K-98-005)

Pollution Prevention Information Clearinghous
U.S. Environmental Protection Agency
401 M Street, SW (7409)
Washington, DC 20460
Phone: (202)260-1023
Fax: (202) 260-4659
Email address: ppic@epa.gov

DfE Garment and Textile Care Program Web Site:
http://www.epa.gov/dfe/garment/garment.html