



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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off-site

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OFFICE OF WATER
RECEP. WASTE MANAGEMENT

NOV 6 1980

LAW DEPARTMENT

Dear Mr. Bierlein:

This is in response to your inquiry regarding applicability of the Resource Conservation and Recovery Act, and hazardous waste management regulations issued thereunder, to the practice in the compressed gas industry of repetitive transportation of cylinders by gas manufacturers and their customers.

As described to us during your meeting here on October 15, all cylinders are owned by or are under the equivalent control of the gas supplier. When the customer has completed his use of the gas, the cylinder is returned to the supplier. As a matter of safety, there is residual pressure in the cylinder when it is returned. (The return transportation is extensively regulated by the Department of Transportation under the federal Hazardous Materials Regulations, 49 CFR 170-189.) The customer's purpose in making the shipment is to return the supplier's property, not to discard the remaining contents. The customer does not make the decision on the final disposition of the residue in the cylinder; this is the exclusive prerogative of the gas supplier. Further, the decision whether or not to discard the contents of the container is not made until the container is returned to the supplier.

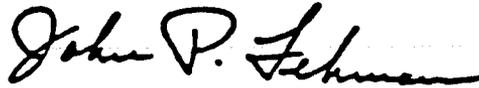
Under these circumstances; the customer is not generating a waste by merely returning the cylinder and, neither the returned container nor the contained residue is a "solid waste" as that term is defined in the Resource Conservation and Recovery Act and Part 261 of the EPA regulations of May 19, 1980. Under §261.3(b)(1), a material must be "discarded" before it can be a solid waste. The description you have provided indicates that residual gases are not discarded until the cylinders are returned to the supplier, that no decision is made to discard



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the residual gases until the cylinders are returned, and that the customer plays no part in this decision. Therefore, the material is not discarded until the cylinder reaches the supplier and a decision is made whether to discard the residual gas. Consequently, the customer's return of the supplier's cylinders that may hold some residue is not the shipment of a solid (or hazardous) waste. Simply returning such cylinders does not make the customer a generator, and the shipment need not be manifested to an EPA-permitted facility or be carried by a hazardous waste transporter.

Sincerely,



John P. Lehman, Director
Hazardous and Industrial Waste Division
Office of Solid Waste (WH-565)

B. Ignitable Liquid Residues in Containers

One commenter was concerned with the one-inch rule as applied to residues in empty containers that are hazardous solely because they are ignitable liquids. The commenter argued that the fluidity coupled with the flash point of liquid ignitable residues should be of more important regulatory concern to EPA than the quantity of liquid ignitable residue remaining in an empty container.

Specifically, the commenter pointed out that many liquid ignitable wastes have low fluidity and therefore do not drain well, and that more than one inch of such materials may remain in a container despite efforts to drain the residues in such regulated containers are actually of low concern in landfills because they are not mobile liquids. EPA disagrees with the commenter. EPA is concerned with such wastes because they pose a fire hazard (unless the containers are handled in such a way as to prevent ignition), and not necessarily because they may leach into groundwater, especially if these wastes are not also toxic. In fact, containers holding greater than one inch of extremely viscous ignitable material may pose a greater hazard than the same amount of a very fluid ignitable material because the waste will not tend to run out of the container and mix with other wastes and be diluted.

The same commenter stated that the specific flash point of a material within the "broad" EPA ignitability definition (flashpoint < 140°F) may be a more important factor than the one-inch residue limitation in defining whether a residue in a container is hazardous and ought to be subject to regulation. The commenter believed that the flash point characteristic as well as the flash point is important in determining the hazard posed by an ignitable liquid waste to human health and the environment, and that, for example, container residues (respective of quantity) which flash below 140°F but do not support combustion, are less hazardous and should not be treated as hazardous wastes.

In this comment letter, the writer was so much questioning the one-inch rule as he was questioning EPA's definition of ignitable liquid. EPA previously explained its rationale for setting a flash point limit of 140°F in defining an ignitable liquid. (See 45 FR 33100, May 19, 1980, and Groundwater Document: § 261.21—Characteristic of Ignitability, May 2, 1982.) EPA has previously

recognized that wastes classified by one hazardous waste characteristic may pose various degrees of hazard based on other properties of the waste; for example, EPA has recognized that certain materials that flash will not support combustion, and thus EPA excluded aqueous solutions which contain less than 24 percent alcohol by volume from the definition of ignitable liquid.

The Agency has received other comments on degree of hazard issues and is continuing to resolve them. Recently, the Agency has received a petition from National Paint and Coatings Association (NPCA) on the same issue of ignitable liquids discussed above. As a result, the Agency is considering amending the definition of ignitable liquid and will consider the concerns of the commenter when addressing NPCA's petition. The Agency is therefore not changing the definition of the one-inch rule for ignitable liquids at this time.

C. Gas Residues

In § 261.7(b)(2), EPA defines an empty compressed gas container as one in which the pressure approaches atmospheric. Several commenters expressed concern that users of gas cylinders might try to use extraordinary means to reach atmospheric pressure before returning gas cylinders to the gas suppliers who own them.

The commenters suggested substituting the words "... reaches the pressure of the users' internal distribution manifold" for "approaches atmospheric." EPA does not agree with this comment because this change could result in a significant amount of material remaining in the cylinder. EPA defined an empty gas cylinder as one in which the pressure approaches atmospheric, because the Agency is concerned with the hazards posed by the residual gas, which, if improperly managed, may pose a substantial hazard to human health and the environment. EPA believes, however, that this comment largely resulted from confusion over when a compressed gas cylinder becomes subject to RCRA control.

On November 3, 1980, in a letter to Lawrence W. Bierlein of the Compressed Gas Association, John P. Lehman of EPA clarified the applicability of the RCRA hazardous waste regulations to users of compressed gas. The letter stated that the return of the used cylinder to the supplier was not generation of waste under RCRA. This letter was widely distributed to users of compressed gas cylinders and, at the request of many compressed gas users, an edited version

of the information contained in the letter is printed below for the reader's convenience. (The Compressed Gas Association provided the information on the use and disposal of compressed gas cylinders to EPA.)

All compressed gas cylinders are owned by or are under equivalent control of the gas supplier. When the customer has completed his use of the gas, the cylinder is returned to the supplier. As a matter of safety, there is residual pressure in the cylinder when it is returned. (The return transportation is extensively regulated under the Federal Hazardous Materials Regulation, 49 CFR 170-189). The customer's purpose in making the shipment is to return the supplier's property and not to discard the remaining contents of the cylinder. The general practice is to return cylinders for refilling. The customer does not make the decision on the final disposition of the residue in the cylinder; this is the exclusive prerogative of the gas supplier. Further, the decision whether or not to discard the contents of the container is not made until the container is returned to the supplier.

Under these circumstances, the customer is not generating a waste by merely returning the cylinder and neither the returned container nor the contained residue is a "solid waste" as that term is defined by the Resource Conservation and Recovery Act and 40 CFR Part 261. Because the residue gases are not discarded by the customer and the used compressed gas cylinder is returned to the supplier, the decision that renders the cylinder (and contained gas) to be a waste is made by the supplier. The customer's return of the supplier's cylinder that may hold some residue does not constitute the shipment of a solid (or hazardous) waste. The cited DOT requirements apply, however, and the containers may have to be transported as a hazardous material.

D. Regulation of Residues of Wastes Listed in § 261.33(e)

Under § 261.7 and § 261.33(c), residues in containers which held acutely hazardous wastes are not excluded from regulation unless the container which had previously held a waste listed in § 261.33(e) is triple rinsed or cleaned by an equivalent method. One commenter took issue with this provision, stating that the amounts of acutely hazardous wastes remaining in containers which are emptied according to § 261.7(b)(1) are *de minimis* and pose no significant threat to human health and the environment. The commenter further stated that the resulting rinsate would require increased handling and exposure of the waste to humans, and that such small amounts of residue do not justify this increased handling and exposure.

EPA disagrees with the commenter that quantities of acutely hazardous waste remaining in a container which has been emptied according to § 261.7(b)

LABORATORY-WIDE REMOVAL OF COMPRESSED GAS CYLINDERS

PROBLEM:

Presently more 1500 unwanted compressed gas cylinders throughout the Laboratory require some form of enhanced management. Many cylinders have inoperable valves, questionable integrity, unknown contents, or possible radioactive contamination. The current inventory also shows that cylinders can contain the most toxic of manmade organic and inorganic chemicals. The current storage of the majority of these cylinders do not conform with RCRA or OSHA.

To provide enhanced management of these cylinders, the Waste Management Group, HSE-7, will remove the cylinders and determine their contents. HSE-7 will then ensure that the cylinders are recontainerized into DOT-approved containers and/or shipped off-site for ultimate disposal through incineration.

HSE-7 anticipates that this effort will take approximately 8 to 12 months and cost around \$1.5 M. Ongoing Laboratory operations could be interrupted.

The DOE has not approved the required NEPA documentation for this new program, which is scheduled to begin July 16, 1990. Approval could take more than a year. Safe siting of the gas cylinder project is critical because of the possibility of a maximum credible release from an accident.

SOLUTION:

Through the assistance of a highly qualified subcontractor, the Laboratory must begin the timely management of these highly dangerous compressed gas cylinders as soon as possible. The subcontractor has extensive experience in managing unknown and unstable cylinders at federal and commercial facilities, at Superfund sites, and in several states. The subcontractor provides the maximum level of expertise in radiation protection and analyses, gas cylinder recontainerization and sampling, and treatment by incineration at a approved Laboratory-inspected facility. Inform DOE of the action we are taking to eliminate the problem.

RECOMMENDATIONS/ACTIONS:

The Laboratory's effort in managing compressed gas cylinders must begin on July 16, 1990. For maximum protection of the environment, Laboratory personnel, and the public, this effort must be sited at TA-54, Area G.

With extensive coordination by HSE-7 with the division's Waste Coordinators, Sector Leaders, ENG Area Coordinators, and Pan Am, we will rid the Laboratory of this existing dangerous situation. Also, a meeting will be scheduled to inform DOE of our actions.