



Standard Interpretations

05/08/2006 - General industry and construction standards regarding "in use" or "ready to use" and "storage" of compressed gas and oxygen cylinders for welding; §1910.253(b)(2)-1910.253(b)(4) and §1926.350(a)(10).

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- **Standard Number:** [1910.253](#); [1910.253\(b\)\(2\)](#); [1910.253\(b\)\(3\)](#); [1910.253\(b\)\(4\)](#); [1926.350](#); [1926.350\(a\)\(10\)](#)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

May 8, 2006

Mr. Kenneth J. Yotz
Senior Vice President
Environmental, Management and Training Systems, Inc.
919 St. Andrews Circle
Geneva, IL 60134-2995

Dear Mr. Yotz:

This is in response to your July 21, 2001, letter to the Occupational Safety and Health Administration (OSHA), in which you ask the Directorate of Construction to review interpretations of the requirements for oxygen and fuel gas cylinder storage for both general industry, 29 CFR 1910.253(b)(2) to 1910.253(b)(4) and construction, §1926.350(a)(10). You believe that two interpretations previously issued to you, dated September 9, 1993, and April 17, 2001, which interpret general industry requirements, are in conflict with our [December 31, 1998, letter to Mr. Steven Dineen](#), which interprets construction requirements. The issue is when is a cylinder used in construction considered to be "in use" or "ready to use." Please accept our sincere apologies for the inordinate and inexcusable delay in providing you with this interpretation. I am reviewing the reasons for the delay and will take the necessary action to prevent such a delay from occurring in the future.

In the Dineen letter, we addressed the cylinder storage requirements applicable to construction. We stated that the gas cylinder storage requirements in §1926.350(a)(10) apply:

when it is reasonably anticipated that gas will not be drawn from the cylinder within 24 hours (overnight hours included).

We explained the basis for this interpretation of the construction standard as follows:

We believe that it is reasonable to define "storage" based on whether it is reasonably anticipated that gas will be drawn from the cylinder in 24 hours. The purpose of the separation/fire wall standard is to prevent the spread of fire and multi-cylinder explosions in the event a single cylinder leaks and a fire begins. Both storage options — separation and fire wall — will usually require an employer to set up a storage area some distance from the welding/cutting area. This means that cylinders will usually have to be transported from the welding/cutting area to the storage area in order to meet the storage requirements. Also,

regulators will have to be removed and the cylinders capped each time they are in storage.

The reasonable anticipation of use in 24 hours approach recognizes that welding/cutting operations usually involve gas being drawn sporadically. A shorter time period than 24 hours would mean that gas cylinders would have to be transported back and forth from work area to storage area. Regulators would be removed and re-installed and the cylinders capped and uncapped numerous times over the course of a day or two.

There are risks involved with moving cylinders and frequently removing and re-installing regulators and caps, with the attendant wear on tank and regulator threads. The separation/fire wall requirement must not be interpreted in a way that will raise the risk of gas leaks and tank damage, which the standard is also supposed to prevent. The goal of preventing the spread of fire from one tank to another is not furthered by having to move cylinders in and out of storage conditions with excessive frequency. A 24 hour period balances the need to ensure safe storage conditions and the need to minimize the number of times cylinders have to be taken in and out of storage.

While the cylinder storage provisions in the general industry standards §1910.253(b)(2) and 1910.253(b)(4) are similar to the provisions in the construction standard, both require separate interpretation regarding this issue.

Our interpretation of the construction standard reflects typical conditions specific to construction sites. Construction site conditions are inherently changeable and unpredictable. In particular, on a construction site, there typically is frequent and unpredictable movement of personnel, heavy equipment and material. As site conditions change, there may be delays of more than a day; and during such periods the cylinders must not remain vulnerable to being struck and/or knocked over. For these reasons, the Dineen letter only addresses hazardous characteristics particular to construction sites.

Having explained how to determine if the storage requirements apply to gas cylinders used in construction (the "24-hour" rule), there is another issue that is arguably raised by your July 21st letter. Specifically, whether failure to comply with those storage requirements for single acetylene and oxygen cylinders on welding carts¹ or secured to substantial vertical surfaces should be considered *de minimis*² and not be cited.

The Agency has conducted an extensive review of the application of the storage requirements in construction to situations where there are only two cylinders on a cylinder cart or where the cylinders are secured to a wall or other substantial vertical surface.³ The Agency has determined that, under §1926.350(a)(10), failure to comply with the storage requirements with respect to a single acetylene and a single oxygen cylinder on a cylinder cart would be considered a *de minimis* violation where all of the following parameters are met:

- (1) No more than a single acetylene cylinder and a single oxygen cylinder are on a cylinder cart. The cylinder cart must be specifically designed to hold/carry oxygen and acetylene cylinders in the upright position. The cylinders must be securely held to the cart (such as by straps, chains or other securing device).
- (2) The cart is on a firm, level surface.
- (3) The cart is not in an area where there is a reasonably foreseeable risk of being struck by vehicles, equipment, or materials (such as in a pathway for vehicles on a construction site).
- (4) Both cylinders either have valves closed with protection caps on or are connected to a properly functioning regulator.

Similarly, failure to comply with the storage requirements with respect to a single acetylene and a single oxygen cylinder that are firmly attached to a substantial vertical surface (such as a wall) would be considered a *de minimis* violation of §1926.350(a)(10) where all of the following parameters are met:

- (1) The only cylinders in the area for which the storage requirements apply but are not met are a single acetylene cylinder and a single oxygen cylinder.
- (2) Both cylinders are firmly attached (such as by chains or other secure means) in an upright position to a substantial vertical surface (such as a wall, steel column, exposed wall studs).
- (3) The cylinders are not in an area where there is a reasonably foreseeable risk of their being struck by vehicles, equipment, or materials (such as in a pathway for vehicles on a construction site).
- (4) Both cylinders either have valves closed with protection caps on or are connected to a properly functioning regulator.

If these parameters are not met, the employer must apply the 24-hour rule to determine if the storage requirements apply. If these parameters are met, OSHA will consider the violation to be *de minimis*, regardless of the period of time in which the cylinders are on the cylinder cart or attached to the vertical

surface.

We recognize that, with this result, there remains a technical disparity between the manner in which OSHA interprets the cylinder storage provisions of the respective general industry and construction standards. This disparity results from independent interpretations that recognize certain distinct occupational conditions and factors in the respective industries. However, in practice, there will be no disparity in the manner in which OSHA administers and enforces the cylinder storage provisions at general industry worksites and construction worksites. If a general industry employer meets all the conditions above, OSHA will consider the cylinders to be "in use" or "ready to use" and not subject to the general industry cylinder storage provisions. If a construction employer meets all the conditions listed above, OSHA will consider the violation of §1926.350(a)(10) to be a *de minimis* violation of the OSH Act. In both cases, OSHA will not issue a citation or propose a penalty, and the employer will be under no legal obligation to change the manner in which it was using the cylinders at its worksite.

If you need additional information, please contact us at: U.S. Department of Labor, OSHA, Directorate of Construction, Office of Construction Standards and Guidance, fax # 202-693-1689. You can also contact us by mail at the above office, Room N3468, 200 Constitution Avenue, N.W., Washington, D.C. 20210 although there will be a delay in our receiving correspondence by mail.

Sincerely,

Edwin G. Foulke, Jr.

¹ Note that some companies are using welding carts with separation barriers in an attempt to comply with the construction storage requirements without having to remove the cylinders from the cart. We addressed this scenario in a [May 23, 2001, interpretation letter to Mr. John Stallbaumer](#) and [January 23, 2004, letter to Mr. Frank Salvucci Jr.](#), in which we stated:

[A]s long as the barrier is at least 5 feet high, meets the [½-]hour fire resistance rating and is designed to prevent the spread of the fire from one cylinder to another, employers using the product would meet the requirements of §1926.350(a)(10). [\[back to text \]](#)

² Under OSHA's *de minimis* policy, *de minimis* violations are those which have no direct or immediate relationship to safety or health. Consequently, no citation is issued. [\[back to text \]](#)

³ The Agency also considered current industry consensus gas cylinder standards. [\[back to text \]](#)

[Corrected June 9, 2006]

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