



Joint Task Force National Capital Region Medical **INSTRUCTION**

NUMBER 4105.01

SEP 14 2012

J-9

SUBJECT: Delivery, Receipt, Storage, and Issue of Oxygen

References: See Enclosure 1

1. PURPOSE. This Instruction, in accordance with the authority in References (a) through (d), establishes policy and procedures for the delivery, receipt, storage, and issue of oxygen.

2. APPLICABILITY. This Instruction applies to Joint Task Force National Capital Region Medical (JTF CapMed), Fort Belvoir Community Hospital (FBCH), Walter Reed National Military Medical Center (WRNMMC) [hereafter, FBCH and WRNMMC are referred to as Medical Treatment Facilities (MTFs)], and the Joint Pathology Center (JPC).

3. POLICY. It is JTF CapMed policy that the medical gas system is installed, stored, and tested in accordance with References (e) through (g). Testing includes, but is not limited to, cross-connection, purity, pressure, and alarm testing. All testing and certification of the medical gas system is done by an independent testing agency to be determined by JTF CapMed.

4. RESPONSIBILITIES

a. Director, Facilities (J-9). The J-9 Director shall ensure the determination of an independent testing agency and certification of the medical gas system.

b. MTF or Center Facility Manager. The MTF or Center facility manager shall:

(1) Establish and maintain a liquid oxygen management plan to be included in the Utility Management Plan.

(2) Identify, document, investigate, and evaluate the piped medical gas system including liquid oxygen tanks, piping, and valves as well as distribution piping and zone valves, and storage for oxygen in tanks for medical use. The main storage and liquid oxygen-piped storage

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system shall be inspected and tested per Reference (e) standards as necessary, with documentation.

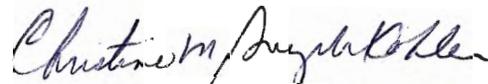
c. MTF or Center Material Manager. The MTF or Center Material Manager shall annually inspect and document the evaluation of the bottled gas management plan and spaces for storage of bottled gases to ensure all requirements of Reference (e) are met.

5. PROCEDURES. See Enclosure 2

6. INFORMATION REQUIREMENTS. JTF CapMed subordinate Commands and Centers are responsible for an annual evaluation of their Medical Gas Plan and liquid oxygen (both piped and bottled) if these types of oxygen are used. This evaluation must be performed by an agency authorized to perform such an evaluation. The evaluation should include information on efficiency and safety. A copy of the annual evaluation shall be provided to JTF CapMed J-9 Director.

7. RELEASABILITY. UNLIMITED. This Instruction is approved for public release and is available from the JTF CapMed Web Site at: www.capmed.mil.

8. EFFECTIVE DATE. This Instruction is effective immediately.



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Executive Director for Healthcare Operations
By direction of the Acting Commander

Enclosure

1. References
2. Procedures

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ENCLOSURE 1

REFERENCES

- (a) Deputy Secretary of Defense Memorandum, "Establishing Authority for Joint Task Force National Capital Region Medical (JTF CapMed) and JTF CapMed Transition Team (Unclassified)," September 12, 2007
- (b) Deputy Secretary of Defense Action Memo, "Civilian and Military Personnel Management Structures for the Joint Task Force National Capital Region Medical," January 15, 2009
- (c) Comprehensive Master Plan for the National Capital Region Medical, April 23, 2010
- (d) Supplement to the Comprehensive Master Plan for the National Capital Region Medical, August 31, 2010
- (e) DoD 4145.19-R-2, "Storage and Handling of Liquefied and Gaseous Compressed Gasses and Their Full and Empty Cylinders," June 16, 2000
- (f) The National Fire Protection Administration 99, "Standard for Health Care Facilities," current edition
- (g) The National Fire Protection Administration 55, "Compressed Gases and Cryogenic Fluids Code," current edition

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ENCLOSURE 2PROCEDURES

1. The gas storage of oxidizing gases such as oxygen and nitrous oxide shall be separated from combustible materials by either a minimum distance of 5 feet if the storage area is protected by an automatic sprinkler system; or an enclosed cabinet of non-combustible construction having a minimum fire resistance rating of 1 half-hour or an approved flammable liquid storage cabinet according to References (e) through (g).

2. Outdoor storage shall be in an enclosure, or within an enclosed space of noncombustible or limited combustion construction, with doors that can be secured against unauthorized entry. Where the storage of a volume is less than a bulk system and is outside in an enclosure (fence), the nearest window of the licensed facility must not be less than 25 feet away. Smoking, open flames, electrical heating elements, and other sources of ignition shall be prohibited within 50 feet of outside storage.

3. Precautionary signage shall be readable from a distance of 5 feet and shall be conspicuously displayed on the door to the room or on the protective enclosure if outside. Note that both oxygen and nitrous oxide are oxidizing gases. This sign shall include, as a minimum, the following wording:

<p>CAUTION OXIDIZING GASES STORED WITHIN NO SMOKING</p>

4. Indoor storage shall meet the minimum requirements based on oxygen in gas form; an equivalent amount of oxygen in liquid form would require 860 times more volume when off-gassed:

a. Storage less than 3,000 Cubic Feet (CF) requires dedicated space (non- or limited combustible), 5 feet on standard electrical devices, 72 square-inch vent in door and restraints. Where located on an egress corridor, no door vent is allowed, mechanical or natural ventilation is required to the outside, 1-hour rated assembly is required, and 1-hour separation is required with automatic sprinkler.

b. Storage greater than 3,000 CF and less than 20,000 CF requires a dedicated space with 1 hour fire-rated separation, 5 feet on standard electrical devices, 72 square-inch natural ventilation or power vent to outside, and restraints. If serving piped system over-pressure devices are required to be vented to the outside.

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c. For storage greater than 20,000 CF, bulk storage requirements are applicable where cryogenic containers are stored, regardless of volume. The provisions for over 3,000 CF shall be observed, including mechanical ventilation in lieu of optional natural ventilation (Reference (f)).

5. For piped medical gas:

a. Two master alarm locations are required; one in the area of the person responsible for maintaining and operating the system, and one in a continuously monitored area, i.e., nurses station. Alarms consist of audible and non-cancellable visible alarms.

b. Piping shall be installed inside pipe or conduit for protection where passing through fire-rated assemblies. Protection shall be continuous to contain leaking material where the piping passes through hazardous areas; mechanical rooms, laundries, etc. No medical gas piping is allowed through kitchens or electrical switchgear rooms with supports, per Reference (f), and pipe labels shall be every 20 feet, located downstream from each riser take-off and each zone box.

6. System testing shall be accomplished in accordance with Reference (f). Outlet verification testing shall be done by any other than the installing or maintaining contractor.

7. Transferring of any gases from one cylinder to another in patient care areas of health care facilities is prohibited. Transferring of liquid oxygen from one container to another shall be accomplished at a location specifically designated for the transferring as follows:

a. Separated from any portion of a facility wherein patients are housed, examined, or treated by a separation of a fire-rated barrier of 1 hour fire-resistive construction; and

b. The area is mechanically ventilated, automatic sprinkler system, and has ceramic or concrete flooring; and

c. The area is posted with signs indicating that the transferring is occurring, and that smoking in the immediate area is NOT permitted.

8. The facility must provide for spill prevention, and provide containment or diversion to an area that provides sufficient vaporization capacity to safely discharge the entire contents of any containers permitted in the area.