

CGA CERTIFICATION BOARD, LLC

CGA M-1 & ASSE 6015 CERTIFICATION

The CGA M-1 & ASSE 6015 dual certification exam provides a comprehensive evaluation of a candidate's knowledge of the process of designing, locating, installing, commissioning, maintaining, testing, removing, and documenting work on a bulk compressed medical gas (CMG) supply system in accordance with CGA M-1, *Standard for Medical Gas Supply Systems at Health Care Facilities* (an American National Standard); ASSE 6015, *Bulk Medical Gas / Cryogenic Fluid Central Supply Systems Installers*; and requirements from applicable national regulations and model codes.

Exam Outline

Topics covered in the CGA M-1 and ASSE 6015 certification exam include:

- Definitions of compressed medical gas central fluid supply systems equipment and components
- Health hazards and safety considerations
- Other applicable codes and standards
 - NFPA 99
 - NFPA 55
 - FDA regulations in 21CFR parts 210 and 211
 - International Fire Code
 - NFPA 1 Fire Code
- Personnel requirements
 - quality control unit (QCU) responsibilities
 - personnel qualifications
 - personnel experience
 - personnel education and training
 - training content
 - certification of supplier qualifications
 - training instructor qualifications
- Site selection requirements
 - meeting code setback distances
 - health care facility responsibilities
 - system owner responsibilities
 - supplier responsibilities
- Site development requirements
 - equipment layout
 - foundations
 - security
- Equipment selection
 - system specifications for main supply and reserve supply
 - equipment specifications
 - vessels / tanks
 - vaporizers
 - high pressure manifolds
 - pressure control devices
 - pressure relief devices for cryogenic supply systems and high pressure supply systems
 - tubing and valves

- fittings
 - piping supports
 - alarms
 - system design
 - vessels / tanks
 - reserve supply system
 - cryogenic compressed medical gas fill system
 - vaporizers
 - pressure control devices
 - process flow diagrams
 - regulator set points
 - line pressure relief valves
 - vendor selection
 - equipment reuse
- Equipment transportation
- Equipment installation
 - temporary system
 - cleaning
 - odor test
 - installation
 - pipe joints
 - brazed joints
 - threaded joints
 - welded joints
 - axially swaged fittings
 - axially swaged, elastic strain preload fittings
 - extruded fittings
 - system identification, marking, and tagging
 - system pressure test
- Startup
 - first fill
 - purge
 - product testing
 - startup testing
 - system verification
 - commissioning
 - system checkout
 - introduction of product to a health care facility
- Operation
- Maintenance
 - vessel pressure relief valves
 - system inspection
 - reporting complaints
 - product recall
- System removal
- Documentation
 - installation and modification
 - before starting work
 - during work
 - upon completion of work
 - equipment inspection

The certification exam does not address:

- piped distribution systems within the health care facility including source valve requirements;
- fabrication of assemblies such as pressure control manifolds that are manufactured in a supplier's shop and qualified for medical gas service in accordance with the bulk CMG supply system installer's policies;
- manufacturing plants or other establishments operated by the supplier or the supplier's agent for the purpose of storing and refilling portable containers, trailers, mobile supply trucks, or tank cars with medical gases;
- non-health care facilities such as laboratories, pharmaceutical, or biotechnology facilities;
- medical vacuum systems; or
- supply systems that generate compressed medical gases on-site.

Exam Information

The CGA M-1/ASSE 6015 dual certification exam contains a minimum of 100 questions. Exam may include multiple choice, true/false, and component identification questions. A candidate must answer 80% or more of the scored questions correctly to achieve certification.

This is an open book exam. Candidates must supply their own materials and are permitted to bring the following resources:

- CGA M-1, *Standard for Medical Gas Supply Systems at Health Care Facilities* (4th ed.);
- NFPA 99, *Health Care Facilities Code* (2018 ed.); and
- NFPA 55, *Compressed Gases and Cryogenic Fluids Code* (2016 ed.).

Each candidate will be permitted 2 hours to take the exam; requests for accommodation for additional time can be made when the exam is scheduled. Candidates are not permitted to share material(s) or use any electronic device during the exam.

Exam Prerequisites

The applicant must:

- submit completed form APP-M1-6015-C;
- provide evidence of their employer's standard operating procedures (SOPs) for bulk medical gas supply system installations. At a minimum, the table of contents must include (1) list of SOPs by name and (2) effective date of SOP table of contents; and
- provide evidence of successful completion of bulk medical gas supply system training (32 hours minimum, including prerequisite courses) compliant with CGA M-1.1, *Standard for Medical Gas Supply System Training*, or with ASSE 6015, *Bulk Medical Gas / Cryogenic Fluid Central Supply Systems Installers*.

NOTE – Some examples include a certificate or letter from the training entity, a print-out statement of completion of an online program, and a letter from a company representative verifying self-directed training.

Exam Fee

The exam fee must be paid in full at the time the applicant schedules their exam session. The CGA M-1/ASSE 6015 exam fee of \$595.00 (USD) includes the candidate's application review, registration, scheduling, and initial exam session. This fee does not include applicable facility

and administration fees for exams held at proctored facilities or customer facilities, which vary per location.

NOTE – Exam fee discount of \$100.00 (USD) available for CGA members.

If the candidate does not successfully pass the first exam, a retest fee of \$195.00 will apply.

Upgrade

A holder of an ASSE 6015 certification may upgrade to the joint CGA M-1/ASSE 6015 certification.

The certification is issued to the company and the individual and is non-transferable if the applicant leaves the company that the certification is issued to.

The certification shall be valid for a maximum of 3 years following the applicant's successful completion of the exam.

To upgrade, the applicant must:

- submit completed form APP-M1-6015-UPG;
- pay applicable recertification fee(s);
- provide evidence of successful completion of bulk medical gas supply system training (4 hours minimum, including prerequisite courses) compliant with CGA M-1.1, *Standard for Medical Gas Supply System Training*, or with ASSE 6015, *Bulk Medical Gas / Cryogenic Fluid Central Supply Systems Installers*; and
- provide evidence of a valid, unexpired ASSE 6015 credential.

Recertification

A holder of a dual CGA M-1/ASSE 6015 certification (not a holder of an ASSE 6015 certification) may recertify his credential.

The certification is issued to the company and the individual and is non-transferable if the applicant leaves the company that the certification is issued to.

The certification shall be valid for a maximum of 3 years following the applicant's successful completion of the exam.

To recertify, the applicant must:

- submit completed form APP-M1-6015-RC;
- pay applicable recertification fee(s);
- provide evidence of successful completion of bulk medical gas supply system training (4 hours minimum, including prerequisite courses) compliant with CGA M-1.1, *Standard for Medical Gas Supply System Training*, or with ASSE 6015, *Bulk Medical Gas / Cryogenic Fluid Central Supply Systems Installers*; and
- provide evidence of a valid CGA M-1 & ASSE 6015 credential issued by CGACB.

Certification and Exam Policies and Procedures

The CGACB Policies and Procedures manual is available for download at <https://cgacb.org/faq/>.