

# **ASSE 6015**

## **BULK MEDICAL GAS SYSTEMS INSTALLER CERTIFICATION PROGRAM**

*NFPA 99: HEALTH CARE FACILITIES CODE*

*NFPA 55: COMPRESSED GASSES AND CRYOGENIC FLUIDS CODE*

*CGA M-1: STANDARD FOR MEDICAL GAS SUPPLY SYSTEMS AT HEALTH CARE FACILITIES*

# **CANDIDATE HANDBOOK AND PROGRAM OUTLINE**

# Table of Contents

**SECTION 1: CERTIFICATION PROGRAM OVERVIEW ..... 3**

- 1.01 MEDICAL GAS TRAINING INSTITUTE ..... 3
- 1.02 CERTIFICATION INFORMATION ..... 3
- 1.03 CERTIFICATION / ELIGIBILITY REQUIREMENTS ..... 3
- 1.04 PROGRAM FEES ..... 4
- 1.05 ABOUT THE PROGRAM ..... 4

**SECTION 2: APPLICATION PROCEDURES..... 5**

- 2.01 GENERAL ..... 5
- 2.02 ADHERENCE TO THE PROFESSIONAL STANDARDS OF CONDUCT ..... 5

**SECTION 3: CERTIFICATION EXAMINATION PROCEDURES ..... 5**

- 3.01 GENERAL ..... 5
- 3.02 CERTIFICATION EXAMINATION ..... 6
- 3.03 REQUIRED TRAINING RESOURCES AND RECOMMENDED DOCUMENTS ..... 6
- 3.04 EXAM SCORING AND SCORE REPORTS ..... 6
- 3.05 PASSING THE EXAM ..... 6
- 3.06 RETAKING THE EXAM ..... 6
- 3.07 REQUEST FOR REVIEW OF QUESTIONS ..... 6
- 3.08 EXAMINATION APPEALS ..... 6
- 3.09 SPECIAL ACCOMMODATIONS FOR TAKING THE EXAM ..... 7

**SECTION 4: CERTIFICATION RENEWAL ..... 7**

- 4.01 RE-CERTIFICATION PROCEDURE ..... 7
- 4.02 FAILURE TO RENEW CERTIFICATION ..... 7

# CANDIDATE HANDBOOK

## ASSE 6015 BULK MEDICAL GAS / CRYOGENIC FLUID CENTRAL SUPPLY SYSTEMS INSTALLER CERTIFICATION PROGRAM

### **SECTION 1: CERTIFICATION PROGRAM OVERVIEW**

#### **1.01 The Medical Gas Training Institute (MGTI)**

The Medical Gas Training Institute (MGTI) is a third-party certification agency for the medical gas industry. MGTI offers testing and certification services for personnel involved in all areas of the industry. MGTI strives to improve the medical gas field by offering high quality testing and high standards while making the content and process as practical as possible. As a personnel certifying agency MGTI is guided by the ISO standard 17024 (Personnel Certification), and maintains high standards for integrity as an organization and for the exam development process. Our mission is to provide comprehensive certification services efficiently and effectively for the medical gas industry.

#### **1.02 Certification Information**

The ASSE 6015 Bulk Medical Gas Systems Installer Certification Program was developed to provide qualified individuals, who are responsible for the installation of Compressed Medical Gas (CMG) Cryogenic Fluid Central Supply (bulk or micro-bulk) medical gas systems with the certification necessary to ensure they have met the requirements of the ASSE Series 6000 Professional Qualifications Standard and are technically competent and experienced in the field of bulk medical gas systems installation. The program is based on the code requirements identified in the NFPA 99: *Health Care Facilities Code*, NFPA 55: *Compressed Gases and Cryogenic Fluids Code*, the CGA M-1: *Standard for Medical Gas Supply Systems at Health Care Facilities*, and FDA *Current Good Manufacturing Practices (CGMP's)*, parts 210, 211 and 820. Candidates will also be tested for a basic understanding of bulk medical gas systems general knowledge, applications, component overview, basic operating principles and performance characteristics, critical safety precautions, and installation and testing procedures.

This program was developed by ASSE 6050 and 6055 Certified Instructors. The program is comprised of a verification of work experience prerequisites and required training, and written and practical exams.

#### **1.03 Certification / Eligibility Requirements**

The Bulk Medical Gas Systems Installer Certification is administered in accordance with the American Society of Sanitary Engineers (ASSE) Series 6000 Standard, Section 6015. Candidates must meet the following requirements in order to become ASSE 6015 Certified.

- A. Per the ASSE 6015 standard certification shall be through a method approved by the firm's quality control unit (QCU).
- B. Candidates shall have documented practical experience in the installation of bulk medical gas / cryogenic fluid central supply systems in accordance with their firm's standard operating procedures (SOPs).
- C. Candidates must pass the written and practical examinations.

### 1.04 Program Fees

The certification exam price schedule can be found on the MGTI website. The exam fee must be received prior to starting the exam. This price is separate from the cost of the required training, but may be covered by the training provider. The exam fee covers the following:

- A. Certification Exams
- B. Completion Wall Certificate, Certification Number & Certification Card
- C. Entry into the database, with notifications about expirations, upcoming trainings, etc.

### 1.05 About the Program

The certification programs were developed by two of the leading authorities on medical gas and vacuum systems in the industry. With combined experience in excess of 50 years, Mr. Jonathan C. Willard and Mr. Douglas Ostraat have designed and developed these programs to focus on those individuals involved in the design, operation, installation, service, and repair of medical gas and vacuum systems. The certification exams were constructed by educational and industry experts with in depth knowledge of the skill and competencies required to perform the field work in these certification areas.

#### **Jonathan C. Willard**

Mr. Willard has worked in the medical gas and health care construction industry for 20 years. In addition to being one of a handful of individuals to attain all of the ASSE 6000 Certifications, Mr. Willard is a principal member of the Technical Committee on Medical Gas and Vacuum Piping Systems (NFPA 99: *Health Care Facilities Code*) and a principal member of the Technical Committee on Industrial and Medical Gases (NFPA 55: *Compressed Gases and Cryogenic Fluids Code*). He is Certified in Plumbing Design (CPD©), and is also a LEED AP© (Accredited Professional), a certified Project Management Professional (PMP©), and a Certified Healthcare Constructor (CHC©) with a Master of Science degree in Business Education (MBE).

#### **Medical Gas Credentials:**

ASSE 6010 Medical Gas Systems Installer Certified  
 ASSE 6015 Bulk Medical Gas Systems Installer Certified  
 ASSE 6020 Medical Gas Systems Inspector Certified  
 ASSE 6030 Medical Gas Systems Verifier Certified  
 ASSE 6035 Bulk Medical Gas Systems Verifier Certified  
 ASSE 6040 Medical Gas Systems Maintenance Personnel Certified  
 ASSE 6050 Medical Gas Systems Instructor Certified  
 ASSE 6055 Bulk Medical Gas Systems Instructor Certified  
 MGPHO Credentialed Medical Gas Verifier (V-0135)

#### **Douglas Ostraat**

Mr. Ostraat has worked in the medical gas and health care construction industry for over 40 years. In addition to holding the following medical gas credentials, Mr. Ostraat has worked in all areas of the industry from respiratory therapy and clinical support to bulk gas supply and distribution, as well as system sales, installation, service, and certification.

#### **Medical Gas Credentials:**

ASSE 6010 Medical Gas Systems Installer Certified  
 ASSE 6020 Medical Gas Systems Inspector Certified  
 ASSE 6030 Medical Gas Systems Verifier Certified  
 ASSE 6035 Bulk Medical Gas Systems Verifier Certified  
 ASSE 6050 Medical Gas Systems Instructor Certified  
 ASSE 6055 Bulk Medical Gas Systems Instructor Certified

### **Copyrighted Program Materials**

All program materials are the copyrighted property of the Medical Gas Training Institute. It is forbidden under federal copyright law to copy, reproduce, record, distribute, or display these materials by any means, in whole or in part. Doing so may result in severe civil and criminal penalties.

## **SECTION 2: APPLICATION PROCEDURES**

### **2.01 General**

Candidates must complete the Program Application and submit it to the training provider or directly to MGTI for review prior to entering into the ASSE 6015 Certification Program. When the application is approved the candidate is allowed to participate in the training course. Once the training course is completed candidates will be able to sit for the certification exams.

In addition to information that verifies eligibility, the application contains a Professional Standard of Conduct. These standards must be adhered to in order to remain certified.

### **2.02 Adherence to the Professional Standards of Conduct**

The Medical Gas Training Institute is responsible to its candidates, certificate holders, employers, the profession, regulatory agencies, and the public for ensuring integrity of all its processes and products of its Certification Programs. As such, MGTI requires adherence to these *Professional Standards of Conduct* by all who have achieved acceptance into the ASSE 6015 Certification Program and/or attained the ASSE 6015 Certification. A candidate must agree on the application to accept and adhere to the *Professional Standards of Conduct*. The standards of conduct are outlined below:

A candidate, who has been accepted into the program and/or certified by the Medical Gas Training Institute agrees to conduct himself/herself in an ethical and professional manner. This includes demonstrating practice-related behavior that is indicative of professional integrity. By acceptance into the program and/or issuance of certificate, the candidate or certified person agrees to do the following:

- A. Maintain professional competence
- B. Demonstrate work behavior that exemplifies ability to perform safely, competently, and with good judgment
- C. Conduct activities with honesty and integrity
- D. Avoid discriminating against any individual based on age, gender, race, color, religion, national origin, disability, or marital status
- E. Avoid conflicts of interest
- F. Abide by laws, rules, and regulations of duly authorized agencies regulating the industry
- G. Abide by rules and regulations governing programs conducted by MGTI

For more information about standards of conduct, infractions, and reporting infractions see MGTI's Policies and Procedures document.

## **SECTION 3: CERTIFICATION EXAMINATION AND PROCEDURES**

### **3.01 General**

Upon completion of a 32-hour training program led by an ASSE 6055 certified instructor, the candidate will be eligible for the certification exams. These exams are administered in accordance with the Medical Gas Training Institute standards. If the candidate is successful in passing the examinations, a wall certificate and certification card will be sent via U.S. Mail to the newly certified individual.

### 3.02 Certification Exams

The exams are based on the content from NFPA 99: *Health Care Facilities Code*, NFPA 55: *Compressed Gases and Cryogenic Fluids Code*, ASSE Series 6000 Professional Qualification Standard, CGA M-1: *Standard for Medical Gas Supply Systems at Health Care Facilities*, applicable FDA CGMP's, and other generally accepted industry practices and documents. The written exam is made up of one hundred (100) multiple choice and true/false questions, with a minimum passing score of 70%. The practical exam involves the demonstration of competence in installation and testing procedures, and the application of their firm's SOP's to code requirements. The candidate is allowed two (2) hours to complete the exams. Candidates are permitted to use the applicable code books during the exams.

### 3.03 Required Training Resources and Recommended Documents

Candidates eligible for the ASSE 6015 program should attain current editions of NFPA 99: *Health Care Facilities Code*, NFPA 55: *Compressed Gases and Cryogenic Fluids Code*, and the CGA M-1: *Standard for Medical Gas Supply Systems at Health Care Facilities*. These texts will be referred to during training and will be required for completing the program. In addition to these, it is recommended that the following documents be attained as well, but not required.

- A. ASSE Standard Series 6000: *Professional Qualifications Standard for Medical Gas Systems Personnel*
- B. FDA *Current Good Manufacturing Practices (CGMP's)*, parts 210, 211 and 820

### 3.04 Examination Scoring and Score Reports

Candidates will receive his/her score once the final examinations have been reviewed. Candidates must answer (70%) or more of the questions correctly in order to achieve a passing grade on the written exam. The practical exam will be evaluated by a 6055 certified instructor for accuracy, and the instructor will determine whether or not the answers reflect sufficient competency to earn the bulk installer certification.

### 3.05 Passing the Examination

A candidate who passes the final examinations is awarded the ASSE 6015 Bulk Medical Gas Systems Verifier Certification credential. In recognition of this accomplishment, the candidate will receive a certification package in the mail within (30) business days. The certification package will include a wall Certificate of Accomplishment and wallet Certification Card.

### 3.06 Retaking the Certification Exam

If a candidate does not achieve a passing score on the examination, they will need to go through the re-examination process. Candidates can retake the exam after ten (10) business days. They will need to contact MGTI or their training provider to schedule a time to retake the exam. See MGTI's Policies and Procedures Manual for more details about re-examination, and/or contact us to make arrangements.

### 3.07 Request for Review of Questions

A candidate may challenge, at the conclusion of the examination, any question(s) by completing the question challenge form that is provided in the exam package. Candidates must request a review of any question(s) at the time the examination is taken. See MGTI's Policies and Procedures for more information about question challenges.

### 3.08 Examination Appeals

Candidates may appeal the score of a final examination. Appeals shall be filed in writing to the Medical Gas Training Institute office via U.S. Mail, facsimile, or electronic mail no more than thirty (30) business days from the date that the candidate receives their final score. Appellants will be notified in writing of the decision by the organization. The complete appeals procedure is outlined in the Policies and Procedures Manual.

### **3.09 Special Accommodations for Taking the Exam**

Please contact MGTI for information about testing accommodations, including language/translation accommodation. See the Policies and Procedures Manual for MGTI's guidelines on testing for people with disabilities.

#### ***Copyrighted Final Examination Questions***

All examination questions are the copyrighted property of the Medical Gas Training Institute. It is forbidden under federal copyright law to copy, reproduce, record, distribute, or display these examination questions by any means, in whole or in part. Doing so may result in severe civil and criminal penalties.

## **SECTION 4: CERTIFICATION RENEWAL**

### **4.01 Re-Certification Procedure**

Attaining certification is an indication of mastery of a well-defined body of knowledge at a point in time. Periodic renewal of the certification is required to maintain certified status. Initial ASSE 6015 certification or renewal of certification is valid for three (3) years.

Candidates who successfully complete the examination are provided information about certification renewal requirements in the certification package sent by the Medical Gas Training Institute. The renewal application must be submitted 30 days prior to expiration date as listed on the wall certificate and certification card.

Certificate holders may receive emails notices of pending expiration from MGTI. However, certificate holders are solely responsible for keeping their certifications current and up to date. To ensure receipt of communications, it is suggested that certificate holders keep their contact information current. MGTI is not responsible for ensuring any of these communications are received.

Certificate holders may renew their certification by meeting the following requirements:

- A. Completion of current ASSE 6015 Certification Renewal Application
- B. Completion of a four (4) hour recertification course offered by an ASSE 6055 Certified instructor
- C. Taking and passing the re-certification exam

For current ASSE 6015 Certification Renewal Application and fees, please visit the Medical Gas Training Institute website.

### **4.02 Failure to Renew Certification**

A certified person who fails to renew his/her certification is no longer considered certified and may not use the credential in professional communications, such as letterhead, signatures, business cards, directory listings or signage. To regain certification, the individual must retake and pass the initial certification exams (subject to the usual fees and provisions for testing).