1. **1.4 SUBMITTALS**
   a. Introduced Medical Gas Partnering and Quality Control Plan
      i. Identifies all stakeholders early in the project to partner together and develop a communication strategy that is productive and effective.
      ii. Requires the 3 Phases of Quality Control
      iii. Preparatory Phase – review contract requirements and necessary communication before execution of each portion of work.
      iv. Initial Phase – Ensure the employees completing the work are qualified and executing as expected
      v. Follow Up Phase – Check in on the work repeatedly to ensure continued compliance
      vi. Provides installer certifications for approval,
      vii. Provides Verifiers Credentials for approval
      viii. Provides Certifiers Credentials for approval
      ix. Includes all Quality control processes, procedures and daily documentation to be used during installation.
x. Outlines a process that clearly documents and demonstrates a nitrogen atmosphere is obtained and maintained within the piping throughout the installation process until final certification and activation.

xi. Outlines post installation/precertification blowdown procedures to ensure a sufficient volume and velocity of gas is expelled to carry any particulate through the entire system during the blowdown/white rag test. This test shall be witnessed by the COR and other stakeholders.

b. Submit one physical sample of a typical brazed joint for each approved installer to be compared against their installed work as a Quality assurance measure.

c. Documentation of conditions while work is performed
   i. Daily reports, photos, uncapped piping, nitrogen pressures, Oxygen concentrations and all preapproved Pipefitter’s names and all locations brazed by that individual each workday etc.
   ii. All copies of verification reports documenting compliance with NFPA99 during construction.
   iii. Delivery tickets for nitrogen gas deliveries.
   iv. Installation equipment calibration certificates.
DATE OF THIS VERSION (new)
September 1, 2015

TITLE OF DOCUMENT (new title if applicable):
Gas Systems for Laboratory and Healthcare Facilities, 22 63 00

DATE OF VERSION BEING SUPERSEDED (old):
December 1, 2010

DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):
Gas Systems for Laboratory and Healthcare Facilities, 22 63 00

SUMMARY OF CHANGES IN THIS VERSION:
1. 1.2 – Updated specification sections with related work.
2. 1.3 – Revised applicable publications to their latest versions.
3. 1.4.G - Added submittals for training plans and instructor qualifications.
4. 1.5.I – Added Bio-Based Materials.
5. 2.2.A.1 - Verified requirements for ASTM B43.
6. 2.8 D Table - Revised letter colors for Medical Air identification cover plates.
7. 2.10 A - Revised closed circuit alarm signal monitoring to list BAS only.