Liquid Oxygen (Cryogenics) Storage FAC: 4122

CATCODE: 442258
OPR: AFCEC/COS
OCR: AF/A4LE

1.1. **Description.** This facility provides storage of liquid oxygen tanks.

1.2. **Requirements Determination.** All Air Force installations with a requirement for liquid aviators breathing oxygen and/or liquid nitrogen for aircrew/weapon system purposes shall have liquid oxygen/nitrogen generating capabilities or the storage facility to satisfy the product requirements (For Cryogenic Generating Plant, see **CATCODE 229986**). To ensure quality and safety requirements are met, an individual base analysis shall be conducted to determine the most practical resupply method by either storage capacity/commercial suppliers or organic Air Force generating capability.

1.3. **Scope Determination.** Wherever suitable and reliable commercial sources of supply are available to meet quality specification and quantity requirements for liquid aviators breathing oxygen and/or liquid nitrogen, the procurement method shall be from that of a commercial source. Resupply by commercial sources in economical quantities should also be considered for sufficient storage capacities. Tank sizes range from 400 to 6,000 gallons or metric equivalent and are determined and authorized using Allowance Standard 488, *Fuels Storage and Gas Generating Equipment/Storage Tanks and Maintenance Support Equipment*. Cryogenic storage tanks will be sufficient in number to ensure continuous operation and product quality by permitting periodic purging and vacuuming operations. These tanks are centrally procured.

1.4. **Dimensions.** See paragraph 1.3.

1.5. **Design Considerations.** Provide canopies for all liquid oxygen and nitrogen tanks to maximize tank efficiencies and minimize product boil-off losses, especially in areas of extremely hot weather. The cryogenic facility will be sited using AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, Chapter 43 to ensure minimum distance separation to prevent exposure to hazards, while ensuring safety and quality requirements are adhered to regarding the facility's location. The facility requires sufficient security fencing and access gates to meet protection level requirements outlined in AFI 31-101, *Integrated Defense*. Exterior lighting will be provided IAW AFI 91-203, Chapter 36. Control of hazardous materials shall comply with local, state, and federal requirements and other guidance as defined in AFMAN 32-1084 Overview paragraph 1.3.1 and 1.8.6.