



**DEPARTMENT OF THE AIR FORCE**  
OKLAHOMA CITY AIR LOGISTICS COMPLEX  
TINKER AIR FORCE BASE OKLAHOMA

1 November 2022

MEMORANDUM FOR RECORD

SUBJECT: Item Description, C22-022 LOX Piping and

Manifold

1. The 550 CMMXS of 76 CMXG is requesting utilization of funds for the purchase of LOX Piping and Manifold.

2. The requested equipment item descriptions/specifications are outlined below.

- The Liquid Oxygen (LOX) Tank Piping and Manifold System shall consist of the engineering, design, drawings, manufacturing, construction, and installation of a liquid oxygen (LOX) supply line vacuum jacketed piping and manifold system at Building 1051.
- System shall connect exterior liquid oxygen (LOX) tank to interior of B1051.
- System shall include: all piping from LOX tank to interior of B1051, a manifold inside B1051 with six LOX outlets, one vacuum jacketed flex line per outlet, additional outlet for pressure gauge, cryovent, a 150 psi relief valve, and flexline from tank to piping system.
- System will consist of approximately 52' of vacuum jacketed 1" x 3" sch. 5 SS piping, and will connect to the LOX tank 1" NPT female connections via approximately 4' of 1" x 3" vacuum jacketed flex line.
- B1051 LOX outlets will be 1" NPT female connections.
- System shall include a Cryovent that is just before the beginning of the outlet manifold and an additional manifold outlet will be provided for a pressure gauge.
- The Contractor must be accredited by, or a member of: Compressed Gas Association or International Oxygen Manufacturers Association.
- The Contractor must be capable of designing and inspecting materials at minimum to meet ASME B31.3 for oxygen service.
- All parts shall be NEW approved parts, not refurbished as new, and appropriate for LOX service.
- Contractor will design, manufacture, and install the LOX supply line and manifold in its entirety.
- The Contractor shall test the system after installation to ensure there are no issues and to ensure system is fully functioning.
- The Contractor shall provide the drawings of the design or schematics, and shall also include an electronic maintenance manual as well as a hard copy manual.
- The Government shall retain all rights to the drawings and manuals provided by contractor.