1. ABOVE GROUND FIRE RATED FUEL TANKS (UL2085)
2. Acceptable manufacturers subject to compliance with the specifications:
3. Critical Fuel Systems
4. Highland Tank
5. Modern Welding
6. General
7. Provide and install a XX,000-gallon UL-2085 Fireguard® Thermally Insulated, FG Double-Wall Steel Aboveground Storage Tank. Tank storage volume shall be XX,000 gallons. Tank shall be XX’ Y” in diameter x XX’ Y” long.

Consult with CFS on the size of the tank that is required. These tanks should be included in the equipment schedule.

1. Tank shall be manufactured, tested and labeled in conformance with Underwriters Laboratories’ UL-2085 Standard for Protected Aboveground Tanks for Flammable and Combustible Liquids, Double-wall Construction. Tank shall be manufactured and labeled in strict accordance with Steel Tank Institute (STI) Fireguard® Thermally Insulated, Double-wall Steel Aboveground Storage Tank standards as applied by a licensee of the STI. Tank shall be subject to the STI’s Quality Assurance program and shall be backed by the STI 30-year limited warranty.
2. The tank shall be a cylindrical, horizontal, steel tank intended for the storage of flammable and combustible liquids at atmospheric pressure. Tank shall include integral steel secondary containment and thermal insulation that provides a minimum two-hour fire rating. The tank design shall comply with UL 2085 "Protected" Tank standard having been tested for Ballistics, Impact, Hose Stream, and Pool Fire performance standards. Concrete encased tank designs are not equal and will NOT be permitted.
3. Inner (primary) and outer (secondary) tanks shall be fabricated from mild carbon steel with flat-flanged heads, and lap-welds at all seams and joints. Primary and secondary tanks are air tested at the factory. (Primary tank may need to be retested for tightness at the jobsite prior to commissioning. Consult Authority Having Jurisdiction for requirements.) Tank shall be supplied with emergency vents for the primary and the secondary containment tanks. Emergency venting by "form of construction" is not equal and will NOT be permitted.
4. Tank shall comply with the latest edition of National Fire Protection Association NFPA 30 Flammable and Combustible Liquids Code. The tank system shall also meet or exceed the requirements of:
5. 1997 Uniform Fire Code (UFC) "Protected" AST criteria as per Appendix II-F, including ballistics protection
6. California Air Resources Board (CARB) testing requirements for air emissions
7. International Fire Code
8. Construction
9. Tank shall be of double-wall construction and provide complete secondary containment of the primary storage tank’s contents by an impervious steel outer wall. Inner and outer tanks shall be manufactured in accordance with UL-142 Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids as referenced in UL-2085. Tank shall be fabricated of mild carbon steel with shell seams of continuous lap weld construction.
10. A minimum of 3" of porous, lightweight monolithic thermal insulation material shall be installed at the factory within the interstitial space between the inner and outer wall. Thermal insulating material:
11. Shall be in accordance with American Society of Testing Materials (ASTM) Standards C-332 and C-495.
12. Shall allow liquid to migrate through it to the monitoring point.
13. Shall not be exposed to weathering and shall be protected by the steel secondary containment outer wall (an exterior concrete wall or vault exposed to the elements will NOT be permitted.
14. Each tank shall be delivered as a complete UL-listed assembly including the following fittings and components: (All fittings NPT or flanged, shall be supplied with plastic protectors for shipment)
15. Standard tanks shall include, at a minimum, fittings for normal vent, interstitial monitoring, emergency vent for primary tank, emergency vent for secondary tank, product fill, product pump/supply and liquid level gauge. See standard drawings at www.highlandtank.com for quantity, size and location of fittings on standard tanks. All fittings must be located above the maximum fluid level per UL-2085 / STI Fireguard requirements. Normal vent sizes are equal to, or larger than largest fitting to be used for fill or withdraw from the tank. Emergency vent size is based on the wetted surface area of the tank.
16. Two (2) Welded-on Saddles - Design, size and location determined per STI specifications
17. Lifting lugs shall be provided at balancing points to facilitate handling and installation.
18. Exterior Protective Coating:
19. Surface Preparation: Grit blast - SSPC-SP-6 White Blast
20. Finish: White urethane paint system 5-7 DFT on the shell and heads
21. Threaded fittings with thread protectors shall be supplied as follows (all fittings must be located on tank top per UL):
22. One (1) 2" - Interstitial Monitoring.
23. One (1) 2" - Normal Vent, Primary Tank.
24. One (1) 4", 6", or 8" - Emergency Vent, Primary Tank.
25. One (1) 4", 6", or 8" - Emergency Vent, Secondary Tank.
26. One (1) 4" or 6" - Product Fill.
27. One (1) 2" or 4" - Product Pump or Supply.
28. One (1) 2” or 4” – Filtration Supply (at opposite end of Product Return
29. One (1) 4" - Product Return or Auxiliary (3,000 gal. and larger).
30. One (1) 2" or 4" - Liquid Level Gauge.
31. One (1) 4" - Stage 1 Vapor Recovery, Electronic Level Stage 1 Gauge, or Auxiliary (4,000 gal. 8’0" diameter and larger)..
32. One (1) 18" Manway (min.) with emergency vent (4,000 gallons and larger).
33. Additional fittings available upon request.
34. Optional Equipment
35. Manway(s).
36. 7 or 10 gal. Spill/Overfill Container.
37. Remote fill.
38. External Ladder.
39. External Ladder Platform.
40. Walkway(s) with Handrails.
41. Stairs and Platforms with Handrails.
42. Internal Ladder(s).
43. Fuel Management and Monitoring System.
44. Electronic Overfill Detection Sensors and Alarm Panels.
45. Execution
46. Tank shall be installed on a reinforced concrete base constructed by the owner. Installation and testing shall be in strict accordance with Steel Tank Institute Installation and Testing Instructions for Thermally Insulated, Lightweight, Double Wall Fireguard® Aboveground Storage Tanks.