Part 3 - EXECUTION

1. EXCAVATION
2. Excavation, trenching, and backfilling are specified in Division 2.
3. FUEL TANK INSTALLATION
4. Install tanks in strict accordance with the manufacturer’s recommendations, PEI/RP100 and PEI-RP200, and applicable fire and environmental codes. State and local permits shall be obtained prior to installation.
5. Aboveground tanks shall be clearly marked on all sides with warning signs: “FLAMMABLE” or “COMBUSTIBLE”, “NO SMOKING”, tank volume, product identification, and other signs as required by the applicable codes.
6. Electrical work shall be in accordance with applicable codes and shall be rated for hazardous area as required. Tanks shall be electrically grounded in accordance with N.F.P.A. 78.
7. The tank installation shall be inspected and approved by the tank supplier or its certified contractor. The tank supplier shall submit a comprehensive check-list of quality and safety items critical to the system and verify that the installation has been in accordance with these standards and applicable fire and environmental codes.
8. ABOVEGROUND PIPING INSTALLATION
9. Install in accordance with the manufacturer’s instructions and PEI/RP200-92.
10. Inspect all materials for signs of damage and confirm compliance with specifications.
11. Avoid damage to piping materials or coatings during handling, installation and testing.
12. Provide adequate support for piping on 10’ centers minimum.
13. Group piping whenever practical at common elevations.
14. Install piping to allow for expansion and contraction so that pipe, joints, or connected equipment will not be stressed.
15. Provide clearance for access to valves and fittings.
16. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of the completed system.
17. Install unions, couplings, valves, and flexible connectors in accordance with manufacturers’ recommendations.
18. UNDERGROUND PIPING INSTALLATION
19. Install in accordance with manufacturer’s instructions and PEI/RP100-92.
20. Inspect all materials for signs of damage and confirm compliance with specifications.
21. Avoid damage to piping materials or coatings during handling, installation and testing.
22. Secondary containment piping must slope to piping sump at a minimum 1/8” per foot.
23. Trench and backfill per manufacturer’s instructions.
24. Test primary and secondary pipe for integrity using pressurized air per manufacturer’s instructions.
25. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work and isolating parts of the completed system.
26. TANK LEVEL AND LEAK MONITORING SYSTEM INSTALLATION
27. Install in strict accordance with the manufacturer’s recommendations, National Electrical Code NFPA 70, and NFPA 30A.
28. Electrical work shall be rated for hazardous area as required.
29. Install the monitoring system control panel as indicated on the drawings.
30. Install the tank level transmitter and the interstitial leak probe in the proper locations in the fuel tank. Install the piping sump sensor in the piping sump.
31. Install the overfill alarm as specified and as shown in the plan.
32. The leak monitoring system installation shall be inspected and approved by the equipment supplier or its certified contractor. The leak monitoring system supplier shall submit a comprehensive check-list of quality and safety items critical to the system and verify that the installation has been in accordance with these standards and applicable fire and environmental codes.
33. FIELD QUALITY CONTROL
34. Test fuel distribution system according to NFPA 30. Replace leaking joints and connections with new materials.
35. Test and adjust fuel management and leak monitoring systems controls and devices. Replace damaged and malfunctioning controls and devices.
36. Submit reports of test and procedures in writing to the Engineer.
37. DEMONSTRATION AND TRAINING
38. Train Owner’s maintenance personnel on procedures and schedules related to start-up and shutdown, troubleshooting, servicing, and preventive maintenance.
39. Representatives of equipment suppliers for the fuel tanks, fuel pumps, day tanks, and leak monitoring system shall provide necessary training and technical support to the Owner so that the Owner may properly operate and maintain the systems.
40. COMMISSIONING
41. Before activating the system perform these steps:
42. Flush system piping with grade of fuel to be used by owner to remove any debris and foreign matter in piping prior to filling tank for the first time. Service all system filters and screens and dispose of fuel in accordance with EPA and NFPA regulations after flushing.
43. Perform a complete system commissioning in accordance with the approved commissioning plan.

END OF SECTION 23 XX XX