C800 OmniPlex
Multi-Function Controller

A. Manufacturers:
   1. Earthsafe Systems C800
   2. Engineer Approved Equal

B. General: The fuel system controls shall be a Distributed Control System based on the C800 OmniPlex Controller. The controller shall be programmable to provide control functions for day tanks, duplex pump sets, filtration units, fill stations, and multi-tank selection. The controller shall provide an ethernet connection to a Network Interface Module for communication with the Building Management System (BMS). Alternatively each individual controller shall provide a connection to the BMS using BACnet, Modbus, N2, or LON.

C. Design Criteria:

   1. TheC800 Controller shall provide the following functions when programmed for the specific application :
      a. Day Tank Level Control: Monitoring of day tank level sensors (high alarm, fill stop, fill start, low alarm) and leak sensors. Control of inlet control valves. Control of return flow pumps.
      b. Duplex Pump Control: Pump selection and start / stop control. Pump monitoring for pressure, flow, or motor current. Operation of secondary pump as alternating, lead / lag, or twin. Pump operating hour monitoring.
      c. Filtration / Polishing Control: Pump On – Off Control, Filter Cycle selection based on time selection, time / day selection, or volume selection. Filter monitoring for water, differential pressure, and leak.
      d. Tank Fill System: Monitoring of high level sensors, control of inlet control valves. Annunciation of tank level and alarms at fill station.
      e. Multi-Tank Selection: Control of fouel oile supply and return control valves. Monitoring of tank high and low alarms. Manual and automatic selection of fuel supply tanks. Valve control for filtration.

   2. The C800 Controller shall include the following: (a) graphic user interface with touch screen navigation, (b) integration of operating status information for all system control modules, (c) provide direct BMS data integration using BACnet, Modbus, N2, or LON protocol, (f) provide (4) programmable dry contact relays for integration with generator controls, paralleling gear, fire alarm systems, or security systems.

   3. The Master Controller shall be a NEMA 4 enclosure with minimum 3.5 inch diagonal touch screen. The panel shall include an alarm horn, and emergency stop.

D. Accessory Equipment:

   1. Additional Functions: Where indicated on the drawings for the C800 controller shall provide additional digital or analog outputs.