



NES was selected to fabricate an integrated Dual Phase Extraction / Groundwater Treatment system for a municipal power plant facility in Florida. In order to enhance overall recovery rates and minimize fluid emulsions, the system was designed with individual phase separators and a single common rotary claw vacuum pump. Groundwater treatment equipment included multiple adsorbers in series filled with a modified clay mineral media designed to remove a wide range of hydrocarbons and to extend the life of liquid phase activated carbon. Liquid phase carbon adsorbers were included as a means of water polishing after the media adsorbers prior to final discharge to an infiltration gallery.

### Design Parameters

Site Contaminants	Fuel oil # 2
DPE Vapor System	195 acfm at 17 inches Hg vacuum with catalytic oxidizer for vapor treatment
DPE Water Recovery	10 gpm
Site Power	240 VAC, 3 phase, 4 wire
NEC Area Classification	Class 1, Division 2 system interior with Non-Classified exterior

### System Equipment

DPE Blower	Rotary claw vacuum pump (7.5 hp)
Phase Separators	Individual vessels with manifolds designed to recover free product and groundwater/soil vapor via separate down-well drop-tubes
Oil Water Separator	Stainless steel construction
Solids Filtration	Multiple bag filter units for manual lead-lag switching operation
Primary Water Treatment	Modified clay mineral media
Water Polishing	Liquid phase carbon
Off-Gas Treatment	Catalytic oxidizer (electric operation)
Controls	PLC with auto-dialer and fixed wireless cellular terminal
System Enclosure	Steel cargo shipping container (exterior 40 feet x 8 feet x 9.5 feet)

