



In addition to design and construction administration for AST and UST installation projects, U.P. Engineers & Architects, Inc. has provided related services for our tank installation clients as well as clients with existing tankage. UPEA has completed design of secondary contaminant structures, removal and closure of underground storage tanks, electrical grounding studies, and completion of environmental compliance requirements including Spill Prevention, Contaminant and Countermeasure Plans (SPCC) , Pollution Incident Prevention Plans, and Stormwater Pollution Prevention Plans.

A partial list of clients includes:

- Keweenaw Petroleum Services—Secondary Contaminant Design, SPCC Plan.
- Portage Lake Sewer & Water Authority—Day Tank and Secondary Contaminant Design.
- Moyle Construction Company—Secondary Contaminant Design.
- Northern Oil 1, Inc.—SPCC Plan.
- Rowe Oil Co.—SPCC Plan.
- BP/Amoco Propane Plant—Grounding Study, SPCC Plan, SWPP Plan.
- Cloverland Electric Cooperative—Replacement of obsolete tanks with 10,000-gallon diesel fuel AST and new double-walled piping. Revised SPCC plan to reflect new tank system. Completed at two sites.



ELECTRIC GENERATION PLANT— ABOVEGROUND STORAGE TANK INSTALLATIONS

DAFTER GENERATION PLANT, DAFTER, CHIPPEWA COUNTY, MICHIGAN



PROJECT COST: \$100,000 Per Site

Faced with having to install expensive new liners for old 30,000 gallon diesel-fuel Aboveground Storage Tanks (AST) at their Dafter and Detour Generation Plants, Cloverland Electric Cooperative chose instead to replace these systems with new double wall tanks and eliminate the need for a lined containment basin.

UPEA was retained by Cloverland to design a new AST system. This included a double-wall AST, above ground piping in a concrete lined trench, and the necessary controls at Dafter. In Detour, this included a new double wall AST, double wall underground piping, containment sumps, electronic leak detectors, and electronic tank gauge controls. New fill stations with a concrete truck pad were constructed at each location.

UPEA supervised the installation of these new systems and removal of the existing systems. Cloverland then retained UPEA to complete Spill Prevention Control and Countermeasure (SPCC) Plans and Pollution Incident Prevention Plans (PIPP) for each of these facilities.

