

Agricultural Chemical Warehouse Fire
Location: Central Illinois
Client: Ag Chemical Plant
Project Cost: \$240,000

PROBLEM

An agricultural chemical plant was ignited by an arsonist containing over 11,000 pounds of pesticide and herbicide inventory in Central, Illinois. Remtech principals projected phosgene toxic corridor (Presented by Remtech at the *National Transportation Research Board*) evacuation and shelter-in-place zones used by local authorities. A city evacuation of residents and nursing home patients were shelter-in-place.

SOLUTION

Site remediation measures implemented included:

1. Emergency construction of a 300,000 gallon temporary treatment lagoon for stream leachates from fire fighting operations.
2. Emergency benchscale treatment evaluated included granular activated carbon filtration, hydrogen peroxide oxidization, alkaline hydrolysis, and powdered activated carbon (PAC) addition.
3. A PAC dosage of 1,000 mg/l resulted in clarified water without turbidity and removal of burn residues containing organophosphates, carbamates, and furidan and 8 drums of waste
4. 300,000 gallons of treated water were released to a receiving stream and only 450 gallons of sludge were generated. Chemical burn residues were extracted for offsite disposal. Residual soils were treated insitu via alkaline hydrolysis.

COST/BENEFITS

1. Insitu treatment of 300,000 gallons of fire leachates with powdered activated carbon (PAC) resulted in only 8 drums of waste and allowed draining clean water to the nearby stream.
2. Soil treatment was completed as a research project by at State University.
3. Employing alkanline hydrolysis and PAC treatment saved the client over a hundred thousand dollars.

This project was featured a s a cover story in *Civil Engineering Magazine*. The insurance company, that payed for the cleanup, required Remtech's functional designs for secondary containment and storage for agricultural chemicals as a requirement for future.



Emergency Transfer of Stream Fire Leachates



300,000 gal. Treatment Lagoon for Stream Fire Leachates



Concentrated Burn Residues Extracted & Containerized