



# Project Overview

## FRP REPAIR OF FIRE DAMAGED ELECTRIC POWER STATION

**Name:** Tucson Electric Power (TEP)

**Type:** Power Station

**Location:** Peoria, Arizona

**Completed:** October 2008

### PROBLEM

A section of the TEP station in Peoria, Arizona, was damaged by an explosion and fire. The affected section had a platform with the electric installations and was surrounded by a basin whose function was to capture dripping oil. The fire led to concrete damage particularly on the platform. Tests showed a significantly lower strength of the concrete due to the fire and spilt oil. Additionally it had lost its capacity to serve as a sealed basin. Bidirectional glass fiber was used to effectively seal the basin and recover the functionality of the plant.



### SOLUTION

Before the application of the FRP, concrete surface preparation and repair had to be done. Eucocrete Supreme, SikaTop 123 Plus and Sikadur 32 Hi-Mod were used to fill cracks in the concrete and replace the spalled-off or damaged concrete. Then QuakeWrap® bidirectional carbon fiber was used to seal the basin. After the material was dry, a fire protection coat was applied on top of it and finally a layer of paint was applied as the last step.



## Technical Highlights

- 1,600 square feet section including platform for generator and basin
- Concrete repair and sealing was required
- Bidirectional FRP glass fabric was applied as a sealing layer. Fire coating and paint were applied on top of the FRP.

## Credits

General Contractor: Tucson Electric Power, AZ



*“The FRP Retrofit Experts”*