



## Project Profile

### Client:

Johnson Controls

# Johnson Controls Acid Farm

### Design Professional:

Clark Design Group

### Location:

Middletown, DE

### Delivery Method:

Design-Build

### Key Challenges:

- To complete a renovation and addition project for a battery acid farm located within a fully operational battery plant.

The project was completed in two phases. Phase I was a 1,500 square foot addition to the acid mixing/holding/recovery room and Phase II was an upgrade to the existing 2,880 square foot area. During Phase I the Project Team realized that most of the runoff from the plant's roofs drained onto a paved area in the rear of the building – where they were preparing to start construction. During heavy rains this area became flooded. Bancroft diverted the runoff during construction to ensure that it wouldn't wash out the construction site. They permanently corrected the problem by installing storm water lines underground to a newly installed catch basin. The concrete work for this project was very impressive. Multi-level, monolithic concrete pours were necessary in order to create separate areas for the acid tanks, the reclamation area, and the surrounding work areas. The concrete floor in the acid tank area is lined with a special acid brick that will not corrode when it comes in contact with the acid.

Working in and around a functioning acid processing area was one of the major challenges during construction. Bancroft had to be sensitive to the fact that the equipment could not be shut down without stopping the plant's battery production. The construction area was located in a major thoroughfare for tractor trailers coming onto and leaving the site.