Beneficial Use Case Study

Dover Air Force Base Runway Project

Coal Combustion Product Type
Thermally Refined Class F Fly Ash

Project Location
Dover, Delaware

Project Participants
NRG, Allega Concrete Corporation, SEFA Group

Project Completion Date
December 2016

Project Summary
Dover Air Force Base is home to the U.S. Air Force's fleet of C-5s and C-17s—both large military transport planes. The base's north-south runway 01-19 required a complete renovation to extend its lifespan an additional 50 to 75 years—necessitating its shutdown for a year and a half. Runway 14-32 required a partial overhaul. In February 2016, the project reached the stage at which the intersection of both runways needed to be worked on—temporarily cutting 14-32's length from 12,900 ft to 6000 ft and limiting the operational capabilities of Team Dover's C-5M Super Galaxy fleet.

Project Description
This project involved the replacement of 10,000 ft of concrete pavement along runway 01-19, as well as 1700 ft of concrete pavement along the intersection of runway 14-32 and runway 01-19. In addition, taxiways bravo, charlie, delta, echo, and foxtrot were rehabilitated with an average of 4000 yd^3 of concrete per day. Thermally refined Class F fly ash was sourced from SEFA's STAR processing plant at Morgantown Generating Station in Newburg, Maryland.

To maximize efficiency and production on the project, Allega mobilized two on-site concrete batch plants. Working in conjunction with each other, they placed over 165,000 yd^3 of concrete to manage the large daily production needs. The scope of work on this project entailed over 246,000 yd^2 of 15 and 20 in. concrete finished pavement and over 257,000 yd^2 of 5 in. drainage layer concrete.