Badger State Fruit Processing Expansion

Application

1,991,250 board feet of Foam-Control® PLUS+® 150 Roof Insulation and 967,500 board feet of Foam-Control® PLUS+® 250 and 400 Underslab Insulation was used to insulate a cold storage addition at one of the U.S.’s largest cranberry processing plants, located in Pittsville, Wisconsin.

Project Details

The Badger State Fruit Processing facility expansion project added a very large cold storage building to Badger State’s existing Wisconsin operations. This design-build project was led by the facility management team in conjunction with a local general contractor and builds on the Badger State’s experience using ACH Foam Technologies’ products on a previous expansion. The goal was to select insulation materials that balance performance and environmental impact along with material and operational costs. On the roof, 1,991,250 board feet of Foam-Control® PLUS+® 150 flat roof Insulation was used in two layers of 5.9” for a total R-value of 54.3.

The greater engineering challenge was to support the massive freezer units with an underslab insulation that would prevent subsoil frost heave beneath the constantly cold units. Working closely with ACH Foam’s architectural sales representative, Badger State’s design team developed an innovative layering system that met the R-value and compressive strength requirements yet still reduced construction costs. Though 6” of insulation was required to achieve the target R-value, structural engineers found the design only required 2” of Foam-Control® PLUS+® 400 at 40 psi to support the weight of the freezers. Engineers developed a dual-layer system placing 2” of Foam-Control® PLUS+® 400 on top of a 4” layer of Foam-Control® PLUS+® 250 (25 psi). Using the two different densities of material, designers saved more than $54,000 (13% savings) compared to the cost of a 6” layer of Foam-Control® PLUS+® 400 exclusively.