



Bee Sweet Citrus Processing Plant

Fowler, CA

- SPF contractor** Central Coating Company, Inc.
- SPF Roofing System** 3lb Bayseal® Roofing Foam, Bayblock II® coating
- Completion** September 2015

Project Overview

The Bee Sweet processing plant includes several conjoined metal buildings, with a combined square footage over 250,000 square feet. Bee Sweet wanted improved waterproofing, a common issue when metal buildings are conjoined. They opted to add 88,600 sf of spray polyurethane foam (SPF) roofing to an existing 133,720 sf SPF roof. To maximize energy efficiency, they concurrently replaced and sealed 54 skylights, and added a 2.4-megawatt photovoltaic (PV) system with over 7,400 solar panels requiring 7,497 standoffs, each penetrating the roof and requiring a leak-resistant seal.

Challenge

Environmental stewardship is one of Bee Sweet's corporate priorities. Their commitment to be as environmentally friendly as possible in every step of the growing, picking and packing process drove the decision to upgrade their processing plant to conserve electricity and minimize their environmental footprint. This complicated project included SPF roofing, skylight replacement, and installation of a large rooftop PV system. Although the existing SPF roof was already in place, more roofing was needed when the decision was made to add the solar

panels. Bee Sweet selected a 2.4-megawatt PV system that covered almost the entire plant, including the existing foam roofs and the citrus processing area.

The 88,600 sf processing area had experienced many leaks and needed additional insulation, so a new foam roof was added prior to PV system installation. The massive PV system required a staggering 7,497 standoff brackets fastened into the roof structure. More than one-third of these brackets were sealed as the new SPF roof system was installed. The remaining brackets had to be installed and sealed in the existing foam roof area. Additionally, the processing area had 54 fiberglass skylight panels that were failing. SPF contractor Central Coating Company removed these panels and installed and sealed 54 new curb-mounted, double-lens skylights to improve lighting and increase safety. Despite the size and scope of this project, all work had to be performed without disrupting daily business operations.



Solution

Central Coating Company is a Covestro-accredited SPF roofing contractor and has installed over 60 million sf of SPF roofing. They applied 2" of 3lb Bayseal® SPF roofing foam and a Bayblock II® 100% acrylic fluid-applied membrane to address the significant roof leaks and water management issues, in addition to replacing the existing sky lights. Central Coatings also coordinated with trade contractors including the PV installer, and worked with plant operations personnel throughout the project and during peak harvest season.

Benefits

While metal buildings are an inexpensive way for manufacturers to expand production and warehouse capabilities, the contiguous construction of metal building additions creates costly waterproofing and drainage issues. SPF was the ideal insulation choice to help provide an effective seal for the 4.5 acres of solar panels and 54 skylights. This 2.4 megawatt solar system will help offset electricity use, resulting in 2,300,000 watts of PV electrical generation and substantial daylighting throughout the facility. The Bee Sweet Citrus Processing Plant is among the biggest agricultural solar facilities in California and was awarded a 2016 SPFA National Industry Excellence Award for Foam Roofs over 40,000 sf.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, COVESTRO LLC MAKES NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY SPECIAL PURPOSE OR ANY IMPLIED WARRANTIES ARISING THROUGH TRADE, USAGE, COURSE OF DEALING OR COURSE OF PERFORMANCE, AS TO THE PRODUCT, IMPACT OF THE PRODUCT ON THE VALUE OF YOUR HOME OR ANY ENERGY OR COST RELATED SAVINGS AS A RESULT THEREOF. SOME STATES DO NOT ALLOW EXCLUSIONS OR LIMITATIONS OF AN IMPLIED WARRANTY, SO THE ABOVE EXCLUSIONS MAY NOT APPLY TO YOU. COVESTRO SHALL NOT BE LIABLE FOR PUNITIVE, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF THE PRODUCT OR USE THEREOF. SOME STATES MAY NOT ALLOW THE EXCLUSION OF PUNITIVE, CONSEQUENTIAL AND INCIDENTAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

2400 Spring Stuebner Rd.
Spring, TX 77389
1 800 221 9000
Tel 281 350 9000
Fax 281 288 6450

www.covestro.com/sprayfoam

