

# BRAC 133 WHS

Installer: **Carolina Comfort Foam - Applied Energy Savings Systems (AESS) Division**

Location: **Alexandria, VA**

Type of Job: **Insulation and Air Barrier on inside of Pre-Cast Concrete Panels**

Square Footage of Job: **440,000**

Equipment Used: **Graco H-40; Graco E-30; Graco E-10**

Number of people needed for the Job: **11**

Number of days required by the Job: **135**

Special Requirements:

Foam and coatings used: **Walltite closed cell SPF**

**Project Description:** BRAC 133 is the largest Department of Defense project in the world right now. This 2 high rise complex (15 and 17 stories) is made of structural steel encased by Pre-cast concrete panels. In order to meet the air "tightness" standard and thermal requirement put forth by the Architect and the U.S. Army Corps of Engineers, the only material that would accomplish this was closed cell Spray Polyurethane Foam (ccSPF). The Building Envelope Commissioning agent used WUFI software to model, verify and specify ccSPF. The project challenges were numerous and included: 2 complete "rigs" had to be made portable and moved throughout the 32 level complex; 6 different inspection parties viewed every square foot of this 440,000 square foot application area that received 2" of ccSPF for a total of 880,000 board feet applied; Safety protocols included construction of a physical segregation of the application area each day and then complete removal to allow other work the following day; All application work was required to be second shift work. In the total application of over 880,000 board feet of ccSPF entailing 4 months of work, only 2 deficiencies were ever noted and they were cleared before 24 hours in each case!!

**Benefits of using Foam:** Its highly effective nature met the criteria while fitting into the space between the inside fascia of the pre-cast concrete panels and the back of the drywall allowing maximum utilization of the floor space. Further, by utilizing ccSPF, the HVAC systems were size adjusted to meet the U.S.A. Federal efficiency guidelines for Federal buildings. The field manufacturing aspect of the ccSPF lent valuable LEED points while providing a durable material to assist the project target of constructing to a 100 year standard. Also, the SPF manufacturer's ability to adjust the reactivity levels or "speed" of the foam to meet seasonal conditions facilitated a consistent production process that displayed the workability of ccSPF for all involved parties. Finally, when planning for earthquakes, high wind events, other potential high impact events, the additional structural strength provided by the ccSPF was a valuable plus.



*2011 SPFA Industry Excellence Awards*

**Category: Commercial Wall Foam**

