



*Encasement:
Safeguarding People
While Saving™*

ENCASEMENT OF INSULATION IN FRESH AIR PLENUMS Midwest Location CH-98-1

PROBLEM: Two large fresh air plenums were partially lined with foil-covered fiberglass insulation that was in fair-to-poor condition. The insulation, which totaled approximately 13,000 sq. ft., was also contaminated with molds, thereby contributing to a potentially serious Indoor Air Quality (IAQ) problem.

Removal and replacement was considered, but not chosen because the total cost was estimated to be approximately \$150,000 and it was concluded that the problem would doubtless recur within 10 years or less and require the replacement once again of the insulation.

Doing nothing was not considered an acceptable option because of the deteriorating condition of the insulation and the growing IAQ issues.

SOLUTION: Installation of a Safe Encasement System was considered and a test patch provided the owner with the confidence to encase all of the insulation. Where torn or missing fiberglass insulation was found, repairs and replacement took place. The metal hold-down straps were re-secured where necessary. Bleach was spray applied to the insulation at the outset. A light coat of corrosion-inhibited primer was sprayed onto the metal hold-down straps. Then a 16-wet mil coat of SE-110 Penetrating-Stabilizer (primer) was sprayed over the entire surface and allowed to dry. A 4-inch wide polyester scrim fabric dipped in the primer was applied over all outside corners. A 4-inch wide butyl seam tape with a penetrable fabric backing was applied over all seams and over the hold-down straps, bridging from insulation sheet to insulation sheet. A small amount of additional primer was then applied over the tape. Then 16 wet mils of SE-120 Protective-Skin topcoat was spray-applied over the entire surface. The combined coatings provide a tough monolithic coating system with outstanding adhesion. To improve the wash ability of the system a few mils of SE-170 high-gloss topcoat was finally applied over the entire system. The total cost of the system, including the use of over two miles of tape and the application of the third coat was less than half of the cost of removal and replacement, and that included the cost of scaffolding rental. The owner now has a washable system that should last for at least 20 years.



BEFORE



AFTER

