

# Vertex Insulation: Anaktuvuk Pass

Installer: **Ron Rocheleau**

Location: **Anaktuvuk Pass, Alaska**

Type of Job: **Floor, Wall and Roof of home**

Square Footage of Job: **1000 sq ft**

Equipment Used: **Gusmer H-2000**

Number of people needed for the Job: **2**

Number of days required by the Job: **5**

Special Requirements: **equipment and materials had to be flown in**

Foam and coatings used: **Demilec, Heatlok-Soy & Maxguard**



**Project Description:** Located in Central Brooks Range of Northern Alaska, the small community of Anaktuvuk Pass has a number of homes poorly constructed for their extreme Arctic climate, and a shortage of housing as well. The completion of our model home marks an important milestone in the Anaktuvuk Pass portion of the Cold Climate Housing Research Center's (CCHRC) Sustainable Northern Shelter (SNS) program. The SNS program works with local communities to build affordable, culturally rooted and energy efficient housing in rural Alaska villages by combining traditional home designs with modern homebuilding techniques. As part of the SNS program, CCHRC collaborates with people of the community on the design of the home, to ensure the home is suitable to their lifestyle. Our model home seeks a compromise, using the earth-berm method of the past and the highest efficiency insulation system of the present to create comfortable and durable homes for the Village families.

The construction method on the Anaktuvuk Pass project utilized an innovative building envelope. The technique involves a light steel frame construction with an interior plywood skin. An R-60, soy-based, polyurethane insulation is applied to this framework. The insulation layer is covered by a spray applied polyurea coating, which is durable, waterproof and resilient. Earth-banked walls and a layer of sod on the roof are used to buffer the structure from the strong winds and drifting snow. The home also makes use of natural lighting, water conservation, and other energy-saving techniques. To further reduce the home need for costly energy, solar panels were installed and a wind power system will soon be added to produce renewable energy.

**Benefits of using Foam:** Spray Polyurethane Foam insulation is the only system on the planet that could have made this project possible.



**2009 SPFA Industry Excellence Awards**

**Category: Other**

