



PDC INC. ENGINEERS

Transforming Challenges into Solutions



South Pole Elevated Research Station Antarctica

Strategically situated at the South Pole on a 10,000-foot-thick moving ice sheet, the Amundsen-Scott South Pole Station is located in one of the most extreme remote cold region environments on earth. PDC provided complete mechanical, electrical, and utilities engineering services for the design of the third-generation United States research station.

The South Pole station houses and supports approximately 150 research and operating personnel. One of the premier facilities of its kind, it includes a 80,000 square foot elevated main station that houses berthing, dining, administrative, recreational, support, medical, and science functions; a garage/shop facility; station power plant; station cargo facility; vehicle and aircraft refuelling systems; and emergency facilities.

Owner:

National Science Foundation

Client:

Ferraro Choi & Associates

Location:

Antarctica

Project Completion:

2007

PDC Involvement:

- Mechanical Engineering
- Electrical Engineering

Anchorage:

T: 907.743.3200

F: 907.743.3295

Fairbanks:

T: 907.452.1414

F: 907.456.2707

www.pdceng.com

Innovative design features include:

- Extensive active and passive heat recovery applications
- Use of an ice cavity water well as a thermal heat sink
- Both jacket water and engine exhaust heat recovery from power plant engine-generator units
- Walk-in coolers utilizing a free cooling system
- Heat recovery from high-intensity lighting in growth chambers