

GSA National Science Foundation
ICE CORE FACILITY

Ice core storage racks capable of holding more than 30,000 meters of meteoric ice

The National Science Foundation Ice Core Facility (NSF-ICF) is a mission-critical achievement that replaces an aging 1993-era facility with a modern, resilient, and highly specialized repository for one of the world's most important scientific collections.

Designed to preserve more than 30,000 meters of irreplaceable meteoric ice cores at ultra-low temperatures, the new 19,000-sf facility provides greater storage capacity, improved reliability, and more efficient operations within the same footprint as the former NSF-ICF.

Criticality, innovation, and long-term stewardship guided every design decision for the facility, which includes unique features:

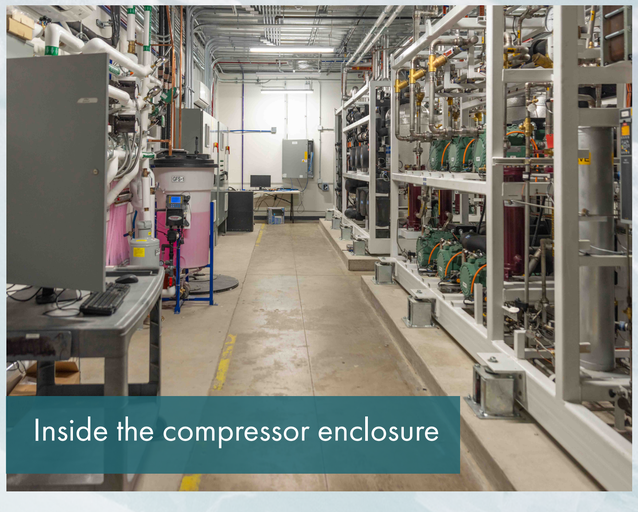
- -40°C refrigerated storage
- Trans-critical CO_2 (R-744) refrigeration system
- Inert gas fire suppression system
- Permafrost prevention system
- Waste heat capture system
- Emergency generator and ability to accept a portable generator for additional redundancy

Owner/Client: GSA, Lakewood, CO
Entering Firm: IMEG, Greenwood Village, CO

Ultra-low refrigeration supports **mission critical** research for **meteoric ice cores** of Antarctica and North America



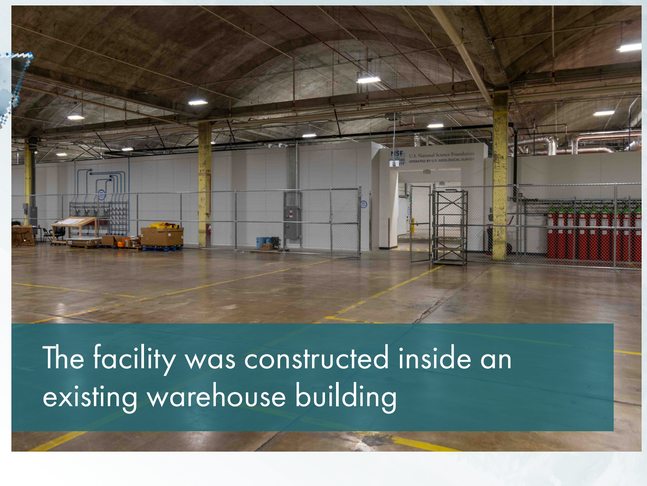
Ice Core Facility entryway and educational space



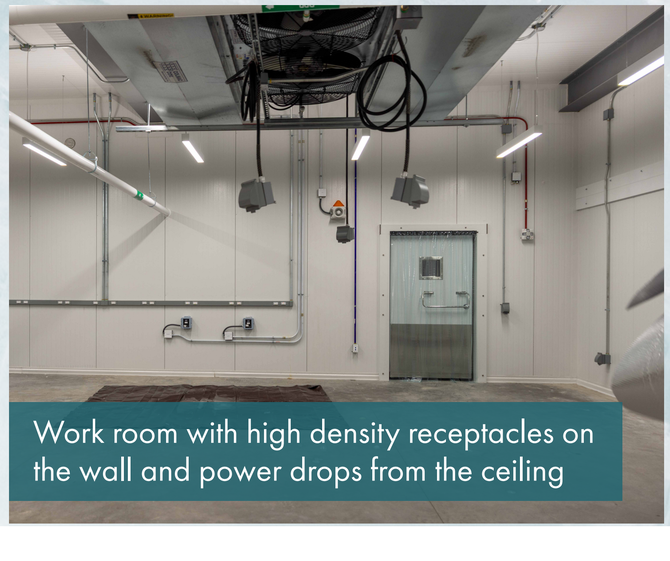
Inside the compressor enclosure



Fire alarm system in educational space



The facility was constructed inside an existing warehouse building



Work room with high density receptacles on the wall and power drops from the ceiling

IMEG
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ACEC
American Council of Engineering Companies of Colorado
EEA
ENGINEERING EXCELLENCE AWARDS