

Project Scope:

Great Northern Engineering provided a design review of the Cryogen Facility with regards to concerns and compliance with CGS's standards and recommended practices for storage of cryogenic fluids. The new modules will be built to adjoin the existing balloon infiltration facility along its Grid North wall. Two 3000-gallon LHe transports/storage dewars, three 1000-gallon LHe transports/storage dewars, and one 400-gallon LN2 transports/storage dewars will be housed within this facility. The facility design will be coordinated with RPSC's SPSM energy program. Specifically, the new Cryogen Facility design will include a fire detection system, an air quality O2 monitoring system with external visual enunciation, infrastructure for communication connectivity, electronic weight monitor read outs, heat ad ventilation zoned for different temperature requirements in each module. The Balloon Inflation Facility design will include fire detection and air quality monitoring system, heat and ventilation.

Project Detail:

- Provided a review regarding the hazards of Cryogenes.
- Provided a review for the physical properties of Liquid Helium and Nitrogen.
- Reviewed and commented on the design criteria for storage of Liquid.
- Provide a design review, recommendations, and calculations.

