



**Systems Commissioned:**

- GMP Storage HVAC
- Domestic Water
- LN2 System
- Clean Compressed Air
- Normal and uninterruptible power supply (UPS) power
- Lighting and lighting control
- +5C Storage Mapping
- -25C Storage Mapping
- -25C LN2 Storage Mapping

**Commissioned: Q4 2020**

**B56 Cold Vault**  
Confidential, PA

The project involved the renovation of an existing dual chamber cold vault to a single 7,715 sf chamber, dual temperature GMP storage warehouse. The new warehouse accommodates approximately 800 pallet positions to store final lyophilized vaccines that are manufactured on site along with gel packs for packing and shipping material. To remain flexible to the overall needs of the business, the space can convert from -25C to a +5C refrigerated vault. The system includes N+1 redundancy which required a liquid nitrogen backup for -25C operation. A new control system allowed the storage control to be fully automated and designed to maximize energy efficiency while ensuring the vault maintained its temperature setpoint.

PrecisCx provided early C&Q documentation including C&Q Execution Plan and system and component level impact assessments. PrecisCx also attended factory acceptance testing of the next refrigeration equipment and associated control system. System walkdowns and installation checks were conducted prior to system energization and functional testing. PrecisCx performed empty chamber temperature mapping of the storage areas at each temperature condition while capturing defrost cycles and equipment failure scenarios.



**Project Reference**

Bill Leonard  
CD & Associates  
bleonard@cdandassociatesinc.com

**Project Data**

Size: 7,715 square feet  
Category: GMP Warehouse  
Scope: Major Renovation  
Type: Leveraged Cx, Temperature Mapping  
Cost: Confidential

**PrecisCx Team**

Principal in Charge: Kari Donovan, PE, CxA  
Project Manager: Jon Carmody  
Sr CQV Engineer: Stephen Obermeier  
CQV Engineer: Lauren Schilling  
CQV Engineer: Ruchi Patel  
CQV Engineer: Robert Tarlo