



Case Study LNG #10

LNG Storage &
Trailer Loadout



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Highlights:

Location — Northern Canada

Scope of Project:

- Engineering and manufacture of turnkey system to receive and store Liquefied Natural Gas (LNG) from micro liquefier and load into trailers
- (2) 20,000 gal LNG storage tanks
- Single Bay Loadout skid
- Pressure build and transfer system
- Safety system
- Startup and commissioning support onsite
- Completed Dec. 2016

Application:

Liquefied Natural Gas storage and trailer loadout project to be located in area of subzero winter atmospheric conditions. Fully rated for -40°F/C.

Project Background:

Original scope was for 40,000 gallons (151m³) of on-site storage. This was subsequently expanded to include the single bay load out and ancillary equipment according to customer requirements.

System Configuration:

The horizontal LNG storage vessels are rated to -40°F/C. The LNG Loading Station operates through pressure transfer from bulk tanks to the trailers and is designed to fill an LNG trailer at 300 gpm flowrate. The load system is equipped with safety features and interlocks to meet NFPA 59A & CSA Z276-15 requirements. A PLC system controls the actuated valves on load out and has the ability to tie into the existing DCS system. Chart Vacuum Insulated Pipe 3" ID interconnecting piping is used throughout the system.

Significant Accomplishments:

- Chart provided a total turnkey equipment package with U.S. factory built equipment and skids for easy site installation
- Prebuilt skids reduced onsite weather delays to near zero hours
- As a single supplier, Chart was responsible for the successful project integration, ensuring compatibility of all components and overall design function
- Storage tanks equipped with valves and level transmitters that allow for the least amount of maintenance and interaction from site personnel
- Automated pressure building system sized for the specific project flows and environmental demands
- Automated safety system ensures safe operation in the event of an unexpected shutdown
- KLAW break-aways designed to shut down trailer fills in the event of a drive-away scenario



Single Bay Loadout Skid