



Buffalo Compressor Station

Project case history

Acoustic and Emissions Solution

Oil & gas station

BUFFALO COMPRESSOR STATION WASHINGTON COUNTY, PENNSYLVANIA, USA

PLANT DESCRIPTION

The Buffalo Compressor Station, located in Washington County, Pennsylvania, is operated by National Fuel Gas Supply Corporation (NFG).

The site utilizes two 2,370 bhp natural gas compressors powered by Caterpillar G3608 reciprocating lean-burn engines to store and transport natural gas from the Marcellus Shale region of Pennsylvania to utilities, pipelines, marketers and energy generators in the northeastern United States.

PROJECT DESCRIPTION

Dürr Universal sought to achieve extremely challenging acoustic performance levels within the overall space constraints. Additionally, emissions after-treatment for the engines was necessary for this facility due to local attainment zone requirements. The Federal Energy Regulatory Commission (FERC) also imposes strict limits on both emissions and acoustic energy given off by the equipment located at compressor stations.

SCOPE

- Custom exhaust silencer system with integrated catalyst
 - Two engine exhaust systems
 - Two turbine exhaust systems
- Resonator to treat emissions

SOLUTION

Dürr Universal engineers developed a custom exhaust silencer system with an integrated catalyst and packaged it with a resonator to treat the emissions and acoustic energy created by the reciprocating engines. The unique vertical combination units met exceedingly strict acoustic requirements. In addition to the two engine exhaust systems, Dürr Universal provided complete turbine exhaust systems for two Caterpillar natural gas-powered compressor turbines at the site, each rated at 10,280 hp.



Exhaust stack installation



Turbine ducting systems



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