

## Acronyms and Abbreviations

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ALARP	As Low as Reasonably Practicable
ASME	American Society of Mechanical Engineers
°C	Degrees Celsius
DNV	Det Norske Veritas
DOT	U.S. Department of Transportation
ESD	Emergency Shutdown Device
ETS	Energy Transport Solutions, LLC
°F	Degrees Fahrenheit
FN	Frequency and Severity of Outcome
FRA	Federal Railroad Administration
ft	Feet
gpm	Gallons Per Minute
gal	Gallon
HAZMAT	Hazardous material
HSE	UK Health & Safety Executive
IR	Individual Risk
LEL	Lower Explosive Limit
LFL	Lower Flammable Limit
LNG	Liquefied Natural Gas
LOC	Loss of Containment
MAWP	Maximum Allowable Working Pressure
NFPA	National Fire Protection Association
PHMSA	Piping and Hazardous Materials Safety Administration
P&ID	Piping and Instrumentation Diagram
psig	Pounds per square inch gauge
QRA	Quantitative Risk Assessment/Analysis
SR	Societal Risk
Train Mile	Mile traveled by a train
UDM	Unified Dispersion Model
UFL	Upper Flammable Limit
yr	Year