

2024 PIPELINE EMERGENCY QUICK REFERENCE GUIDE

INCIDENT RESPONSE

- Always approach from upwind/park vehicle a safe distance away/if vehicle stalls – DO NOT attempt to restart
- Gather information/establish incident command/identify command structure
- Initiate communications with pipeline/gas company representative ASAP
- Control/deny entry: vehicle, boat, train, aircraft, foot traffic, media – refer all media questions to pipeline/gas representatives

RISK CONSIDERATIONS

- Type/volume/pressure/location/geography of product
- Environmental factors – wind, fog, temperature, humidity
- Sight, sound, smell – indicators vary depending on product
- Black, dark brown or clear liquids/dirt blowing into air/peculiar odors/dead insects around gas line/dead vegetation
- Rainbow sheen on the water/mud or water bubbling up/frozen area on ground/frozen area around gas meter
- Other utility emergencies

PIPELINE MARKERS

The U.S. Department of Transportation (DOT) requires the use of signs to indicate the location of underground pipelines. Markers like these are located on road, railroad, and navigable waterway crossings. Markers are also posted along the pipeline right-of-way. Markers may not be located directly over the pipeline it marks.

The markers display:

- The product transported
- The name of the pipeline operator
- The operator's emergency number



PRODUCT HAZARDS AND CHARACTERISTICS

Petroleum (flow rate can be hundreds of thousands of gallons per hour) TYPE 1

- Flammable range may be found anywhere within the hot zone
- H2S can be a by-product of crude oil

Type 1 Products	Flash Point	Ignition Temperature
Gasoline	- 45 °F	600 °F
Jet Fuel	100 °F	410 °F
Kerosene	120 °F	425 °F
Diesel Fuel	155 °F	varies
Crude Oil	25 °F	varies

Natural Gas (flow rate can be hundreds of thousands of cubic feet per hour) TYPE 2

- Flammable range may be found anywhere within the hot zone between 4% and 15%
- Rises and dissipates relatively quickly
- H2S can be a by-product of natural gas – PPM = PARTS PER MILLION
 - 0.02 PPM Odor threshold
 - 10.0 PPM Eye irritation
 - 100 PPM Headache, dizziness, coughing, vomiting
 - 200-300 PPM Respiratory inflammation within 1 hour of exposure
 - 500-700 PPM Loss of consciousness/possible death in 30-60 min.
 - 700-900 PPM Rapid loss of consciousness; death possible
 - Over 1000 PPM Unconsciousness in seconds; death in minutes

- Incomplete combustion of natural gas may release carbon monoxide
- Storage facilities may be present around populated areas/ can be depleted production facilities or underground caverns
- Gas travel may be outside the containment vessel along the natural space between the pipe and soil
- Lower/Upper Explosive Limit depends on characteristics of gas (SDS)

Propane, Butane and Other Similar Products - TYPE 3 (*e.g. Carbon Dioxide / Anhydrous Ammonia)

- Flammable range may be found anywhere within the hot zone
- Products cool rapidly to sub-zero temperatures once outside the containment vessel
- Vapor clouds may be white or clear

Type 3 Products	Flash Point	Ignition Temperature
Propane	- 150 °F	920-1120 °F
Butane	- 60 °F	725-850 °F
Anhydrous Ammonia	- 51 °F	1204-1560 °F

- * Caustic - Can freeze/burn skin
- * Expands Rapidly
- * Liquid to a fog gas state!

