

Kinder Morgan Transmission Pipeline FERC Gas Tariff Quality Provisions

Components	Units	EPNG Receipt	EPNG Delivery	Mojave Receipt & Delivery	CIG Receipt & Delivery	WIC Receipt & Delivery	Ruby Pipeline Receipt & Delivery
Hydrogen Sulfide H ₂ S	Grains/100scf	0.25	0.25	0.25	0.25	0.25	0.25
H ₂ O (Water Vapor)	lbs/MMscf	7	7	7	7 ¹¹	5	5
CO ₂ (Carbon Dioxide)	Mole %	2% ^{4, 5}	3%	3%	3%	3%	2% ¹⁶
N ₂ (Nitrogen)	Mole %	Note ⁵	-	-	No Specification	No Specification	No Specification
O ₂ (Oxygen)	Mole %	0.2% ⁵	0.2%	0.2%	0.001% ¹	0.001%	0.1%
Diluents	Mole %	3% ^{4, 5}	4%	4%	No Specification	No Specification	No Specification
CO ₂ + N ₂	Mole %	Notes ^{4, 5}	See Notes ^{4, 5}	-	No Specification	No Specification	No Specification
Heating Value Gross	Btu Max	No Specification	No Specification	No Specification	1235	No Specification	1080 ¹⁴
	Btu Min	967	967 (995 Calif.)	970	968	950	995 ¹⁴
Hydrocarbon Dew Point	Degrees Fahrenheit	20°F @ Normal Pipeline Pressures	20°F @ 600 psig	20°F @ 600 psig	25°F @ any pressure from 100 to 1100 p.s.i.a	25°F @ any pressure from 100 to MAOP	25°F @ any pressure from 100 to MAOP
Hydrocarbon GPM	Gallons/MMscf	No Specification	No Specification	No Specification	No Specification	No Specification	No Specification
Hydrocarbon Liquids		shall be free at point of Receipt	shall be free at point of Delivery	shall be free from	shall be free	Commercially Free	-
Flowing Temperatures	Maximum Fahrenheit	120°F	120°F	105°F	120°F ³	120°F	120°F ¹⁵
	Minimum Fahrenheit	50°F ⁶	50°F	50°F	No Specification	20°F	25°F ¹⁵
Mercaptan (RSH)	Grains/100scf	0.75	0.30	0.30	No Specification	No Specification	0.3
Organic Sulfur (OS)	Grains/100scf	1.25	0.50	No Specification	No Specification	No Specification	0.75
Total Sulfur (TS)	Grains/100scf	5.0 ⁷	0.75	0.75	5	5	1
Dust, Gums, Solid Matter		Commercially Free	Commercially Free	Commercially Free	shall be free	Commercially Free	Commercially Free
Objectionable Odors, Water, or Other Substances		shall be free of		shall be free from	shall be free	Commercially Free	-
Deleterious Substances		shall not contain in concentrations that are hazardous to health, pipeline or merchantability	shall not contain in concentrations that are hazardous to health, pipeline or merchantability	-	shall be free	Commercially Free	shall not contain
Liquids (Water & Hydrocarbons)		Free of at Receipt temperature and pressure	Free of at Delivery temperature and pressure	shall be free of	shall be free	Commercially Free	-
Waiver Rights							
Enforcement							
Special Notes							

NOTES:

- 1 Oxygen quality specification shall be waived at Point(s) of Delivery on the Valley Line
- 2 In Kansas, Oklahoma, Texas. 5.0 lbs/ mmcf in all other states.
- 3 If Transporter is required to dehydrate the Gas at the point(s) of Injection, then the temperature of such Gas shall not exceed 90 degrees Fahrenheit.
- 4 Exceptions exist in Section 5.2 & 5.3 that all CO₂ greater than 2% to be grandfathered July 31, 1990 as non-conforming Plants & Interconnects.
- 5 Exceptions exist in Section 5.2 & 5.3 that all Diluents greater than that listed be grandfathered July 31, 1990 as non-conforming Plants & Interconnects. Total Combined CO₂, N₂, H₂O
- 6 Any Party tendering gas at a temperature less than 50°F shall receive a waiver of such standard only if a test has been conducted in accordance with procedure set forth in Section 3.1(e)
- 7 The Terrell & Puckett Plants have been grandfathered on July 31, 1990 with a 0.45 H₂S level.
- 8 The Gas redelivered hereunder except with respect to (a) odorant, which shall be governed by Section 8.5 herein. Company will add odorizing agents to gas delivered by it where required.
- 9 The Gas redelivered hereunder except with respect to (b) the minimum temperature set forth in Section 3.1(e) above for any measurement stations at which COMPANY does not have a measurement station.
- 10 The Gas redelivered hereunder except with respect to (c) the limitations on hydrocarbons under Section 3.1 (b) above for deliveries at points upstream of processing plants.
- 11 7 pounds of water per million cubic feet apply to all Receipt & Delivery points within the states of Kansas, Oklahoma and Texas. All other states have a 5 pound limit.
- 12 All Gas delivered by Transporter on the Valley line shall be at an input factor (heating value divided by the square root of the specific gravity) of 1,200 plus or minus 6.2%
- 13 This subsection (h) shall not apply to gathering Systems or Laterals lines.
- 14 Can take between 950 and 1150 if can blend to reach delivery of between 995 and 1080.
- 15 Delivery must be between 100 and 45.
- 16 Can take up to 3% if can blend to deliver at 2%.