 TORUS		· Owner WATER VAPOR ANALYZER AT-142		Document No.	MEA-DS-004
				Revision / Date	A · September 29, 2026
				Issue purpose	Issued for Review
MEASUREMENT · WATER VAPOR ANALYZER AT-142					
Rev.	Date	Revision description	Prepared	Reviewed	Approved
A	2026-09-29	Issued for Review			

NOTES

1. This sheet defines the water vapor analyzer used for tariff compliance and gas quality shut-in.
2. Values marked typical are budgetary. The vendor shall confirm them with its proposal and final data (HOLD H-15).
3. Units are US customary. Pressures are gauge unless stated as absolute; standard volumes are at 14.73 psia and 60 °F.
4. Operating cases C1 to C7 are defined in  GEN-DB-001, Basis of Design, Section 6.

GENERAL

Table 1-1: General Data

Item	Value	Item	Value
Tag	AT-142	Service	Water vapor content, tariff compliance
Technology	Tunable diode laser absorption spectroscopy; ASTM D5454 comparison basis	Location	Analyzer shelter B-101
Area classification	Interior of B-101, Class I, Division 2, Group D, T3 ( GEN-DB-001 Section 8.1); electrical to confirm	Standard	ASTM D5454

PROCESS AND PERFORMANCE

Table 1-2: Process and Performance

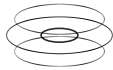
Item	Requirement
Sample	From SP-141 through 3/8"-G-1080-T1, 25 psig, 35 °F minimum, 1.0 SLPM, typical, vendor to confirm (HOLD H-15)
Range	0 to 20 lb/MMscf
Alarm	High at 7 lb/MMscf ( GEN-DB-001 Section 5.2); pre-alarm at 5 lb/MMscf
Accuracy	±4 % of reading or ±0.2 lb/MMscf, whichever is greater, typical, vendor to confirm (HOLD H-15)
Background gas	Design, lean and rich compositions ( GEN-DB-001 Section 5.1); vendor to confirm the spectral correction for C2+ and CO2
Response time	Less than 60 s, plus the sample transport lag of 15 s

CONSTRUCTION AND UTILITIES

Table 1-3: Construction and Utilities

Item	Requirement
Enclosure	Explosion-proof or flameproof
Power	24 VDC from the station UPS ( GEN-DB-001 Section 9.8); 120 VAC only where stated
Validation	Permeation device or certified moisture standard, quarterly; zero with dry nitrogen
Outputs	4-20 mA HART and Modbus to FQI-110 and the RTU; alarm relay



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OPEN ITEMS

Table 1-4: Open Items

HOLD	Item	Responsible party
H-13	Water vapor limit of the receiving pipeline operator	Receiving pipeline operator
H-15	Vendor data	Vendor

