

 TORUS	· Owner TIE-IN LIST			Document No.	MEC-LST-004
				Revision / Date	A · September 29, 2026
				Issue purpose	Issued for Review
MECHANICAL · TIE-IN LIST					
Rev.	Date	Revision description	Prepared	Reviewed	Approved
A	2026-09-29	Issued for Review			

NOTES

1. This list records every point where the station piping connects to piping or equipment by others: the Owner's upstream lateral, the receiving pipeline operator's hot tap, and packaged equipment vendors. Coordinates are the station grid of MEC-DWG-001, Plot Plan; elevations are NAVD88 ft. TI-01 and TI-02 are the scope boundaries of GEN-DB-001, Basis of Design, Section 2.
2. TI-01: the Owner's upstream lateral project furnishes the riser and the 3R bends up to the IJ-101 upstream bevel. The lateral MAOP, wall, grade and pigging program are HOLD H-16. The joint is a tie-in weld with 100 % radiography and magnetic particle testing after a 12 h delay (SPC-SPC-007 and -008).
3. TI-02: the hot tap fitting, tap valve, operator, remote shutoff and RTU are by the receiving pipeline operator (HOLD H-04). The tap is shown at X 220 ft, in line with the outlet riser, as a side tap; the operator confirms location, orientation and trunk depth. The final connection is flanged so that no untested closure weld remains. Interface details are on PIP-DWG-004.
4. Nozzle loads at equipment tie-ins are limited per MEC-CAL-004, Piping Flexibility and Stress.

TIE-INS

Table 1-1: Tie-in Points

No.	Description	Location (X, Y) ft	Elevation	Connection
TI-01	Station inlet: IJ-101 upstream bevel to Owner 12 in lateral riser	(24.0, 8.0)	CL EL 1154.50	NPS 12 BW, 0.375 in X52; mating wall by Owner (HOLD H-16)
TI-02	Outlet lateral 1042 to tap valve outboard flange	(220.0, 255.4)	CL EL 1145.14 (U/G)	NPS 12 Class 600 RF, WN flange on 1042; bolting and gasket by this package
TI-S1	SK-110 inlet flange (1003 to 1010)	(64.0, 89.0)	CL EL 1153.62	NPS 12 Class 600 RF
TI-S2	SK-110 outlet flange (1020)	(104.0, 104.5)	CL EL 1153.62	NPS 12 Class 600 RF
TI-S3	SK-110 DBB bleed collector to 1120	(80.0, 104.5)	EL 1156.0	NPS 1 Class 150 RF
TI-E1	V-101 N1 inlet (1002)	(89.5, 40.0)	face EL 1161.25	NPS 12 Class 600 RF
TI-E2	V-101 N2 outlet (1003)	(78.5, 40.0)	face EL 1161.25	NPS 12 Class 600 RF
TI-E3	V-101 boot drain N5 (1060) and filter drain N6 (1110)	(87.0, 38.8) / (92.5, 38.8)	CL EL 1153.25	NPS 2 Class 600 RF
TI-E4	PR-101 barrel flange at HV-101B (1001)	(45.8, 40.0)	CL EL 1154.50	NPS 12 Class 600 RF

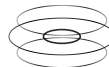
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No.	Description	Location (X, Y) ft	Elevation	Connection	
TI-E5	PR-101 kicker N2 (1101), equalizing N3 (1102), drain N4 (1061), vent N5 (BDV-102)	(39, 40) / (44, 39) / (26.5, 40) / (30, 40)	barrel	NPS 8 / 2 / 2 / 2 Class 600 RF	
TI-E6	H-101 coil inlet N1 (1020)	(175.0, 141.5)	CL EL 1153.62	NPS 12 Class 900 RF (coil), Class 900 companion flange on 1020	
TI-E7	H-101 coil outlet N2 (1022)	(175.0, 138.5)	CL EL 1153.62	NPS 12 Class 900 RF, Class 900 companion flange on 1022	
TI-E8	H-101 burner train fuel inlet (1051 riser to 1140 / 1141)	(208.0, 140.0)	EL 1153.0	NPS 1 Class 150 RF	
TI-E9	FG-101 inlet (1050 at HV-161B)	(91.0, 56.0)	CL EL 1154.50	NPS 2 Class 600 RF	
TI-E10	FG-101 outlets to 1051 (SDV-165) and 1052	(99.0, 55.0) / (99.0, 53.0)	EL 1153.5	NPS 1 Class 150 RF	
TI-E11	G-101 fuel inlet (1052)	(182.0, 26.0)	EL 1152.5	NPS 1 Class 150 RF / NPT per genset	
TI-E12	VS-101 inlet N1 (1070), base drain HV-180A with plug, purge HV-180B	(41.5, 160.0)	CL EL 1154.10	NPS 8 / 2 / 1 Class 150 RF (S1)	
TI-E13	T-101 roof inlet N1 (1190, NPS 4), loadout N3 (1191), drain N4 (1192), EV-193, PVRV-193	(29, 97) / (30, 104.8) / (33.5, 97)	roof / shell	NPS 4 / 3 / 2 Class 150 RF	
TI-E14	SP-141 to B-101 analyzer inlet (1080 tubing)	(112.0, 118.0)	EL 1156.0	3/8 in tube fitting	
TI-E15	CV station: FCV-131 / FCV-132 flanges	(150, 94) / (150, 86)	CL EL 1153.62	NPS 8 Class 600 RF	

Table 1-2: Responsibility, Testing and Drawings

No.	Responsibility	Testing / commissioning	Drawing
TI-01	Owner lateral project / this package	Owner lateral tested separately; golden weld avoided by testing IJ-101 with the station (SPC-SPC-011)	PIP-DWG-010
TI-02	(tap fitting, tap valve) / this package (lateral)	1042 tested to a temporary head before connection; flanged final connection (SPC-SPC-006, 8-04); HOLD H-04	PIP-DWG-004 / -015
TI-S1	Field / SK-110 vendor	Skid shop tested; field joint leak tested	PIP-DWG-011
TI-S2	Field / SK-110 vendor	As TI-S1	PIP-DWG-012
TI-S3	Field / SK-110 vendor	With header 1070 (A1)	PIP-DWG-001
TI-E1	Field / V-101 vendor	Blind or include per MEC-CAL-003	PIP-DWG-010
TI-E2	Field / V-101 vendor	As TI-E1	PIP-DWG-011
TI-E3	Field / V-101 vendor	With TS-01	PIP-DWG-001
TI-E4	Field / PR-101 vendor	Per MEC-CAL-003	PIP-DWG-005 / -010





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No.	Responsibility	Testing / commissioning	Drawing
TI-E5	Field / PR-101 vendor	Per [REDACTED] MEC-CAL-003	[REDACTED] PIP-DWG-005
TI-E6	Field / H-101 vendor	Coil shop tested; blind per [REDACTED] MEC-CAL-003	[REDACTED] PIP-DWG-012
TI-E7	Field / H-101 vendor	As TI-E6	[REDACTED] PIP-DWG-012
TI-E8	Field / H-101 vendor	With TS-03 (A1)	[REDACTED] PIP-DWG-001
TI-E9	Field / FG-101 vendor	With TS-01	[REDACTED] PIP-DWG-001
TI-E10	Field / FG-101 vendor	With TS-03 (A1)	[REDACTED] PIP-DWG-001
TI-E11	Field / G-101 vendor (ELE)	With TS-03	[REDACTED] PIP-DWG-001
TI-E12	Field / VS-101 fabricator	With TS-04	[REDACTED] PIP-DWG-001
TI-E13	Field / T-101 vendor	With TS-05	[REDACTED] PIP-DWG-001
TI-E14	INS / MEA	[REDACTED] SPC-SPC-014	[REDACTED] PIP-DWG-001
TI-E15	Field / CV vendor	Spool in place of CV during hydrotest unless vendor confirms	[REDACTED] PIP-DWG-013

