

RTU / BPCS INTERLOCKS (CP-102A IN B-102)

THESE ARE BPCS FUNCTIONS, NOT SIFS. SIS LOGIC IS ON PRO-DWG-111, BMS LOGIC ON PRO-DWG-112. EVENTS AND ALARMS REPORT TO OWNER SCADA AND, WHERE AGREED, TO (HOLD H-14).

I-07 GAS QUALITY SHUT-IN (15 MIN ADJ.)

GC: HHV 970-1,150 BTU/SCF,
CO2 2.0 %, INERTS 4.0 % (DWG 104)

AT 141

AT 142 H2O > 7.0 LB/MMSCF

AT 143 H2S > 4.0 PPMV (0.25 GR)

AT 144 O2 > 10 PPMV

TT 173 DELIVERY TEMP < 40 F
OR > 120 F (DWG 108)

HOLD H-13

I-10 FCV DUTY / STANDBY SWITCHOVER

ZT 131 FCV-131 POSITION

ZT 132 FCV-132 POSITION

ZSO 131A HV-131A OPEN

ZSO 131B HV-131B OPEN

ZSO 132A HV-132A OPEN

ZSO 132B HV-132B OPEN (DWG 107)

PT 134 OUTLET PRESSURE HH
1,200 PSIG, 3 S (DWG 107)

BPCS INTERLOCK SUMMARY

DETAIL AND CONSEQUENTIAL ACTIONS IN INS-LST-004; SIS INTERLOCKS ON PRO-DWG-111.

ID	FUNCTION / EFFECT
I-07	GAS QUALITY SHUT-IN (BPCS): RAMP FIC-131 TO ZERO, THEN XY-103Q CLOSES SDV-103
I-10	FCV DUTY / STANDBY SWITCHOVER (BPCS): TRANSFER FY-131 OUTPUT TO STANDBY FCV
I-11	OUTLET PRESSURE HH (BPCS): CLOSE FCV-131 / FCV-132 (LATCHED)
I-12	LIQUID LEVEL PERMISSIVES (BPCS): LIC-104 / LCV-104 HOLD CLOSED
I-13	METER VERIFICATION PERMISSIVES (BPCS): REJECT COMMAND, RESTORE RUN LINE-UP
I-14	HEATER MODE (BPCS): TCV-152 LOW FIRE, HEATER DISABLE HS-150P
I-15	V-101 BYPASS PERMISSIVE (BPCS): FIC-131 START INHIBIT, ALARM
I-16	ESD CONSEQUENTIAL ACTIONS (BPCS): FCVS TO 0 %, FIC-131 TO MANUAL, HEATER DISABLE

NOTES / REFERENCES

REF: PRO-DWG-100 SH 2 (INSTRUMENT LEGEND)

REF: INS-LST-004 (CAUSE AND EFFECT MATRIX)

REF: INS-LST-003 (ALARM AND TRIP SETPOINTS)

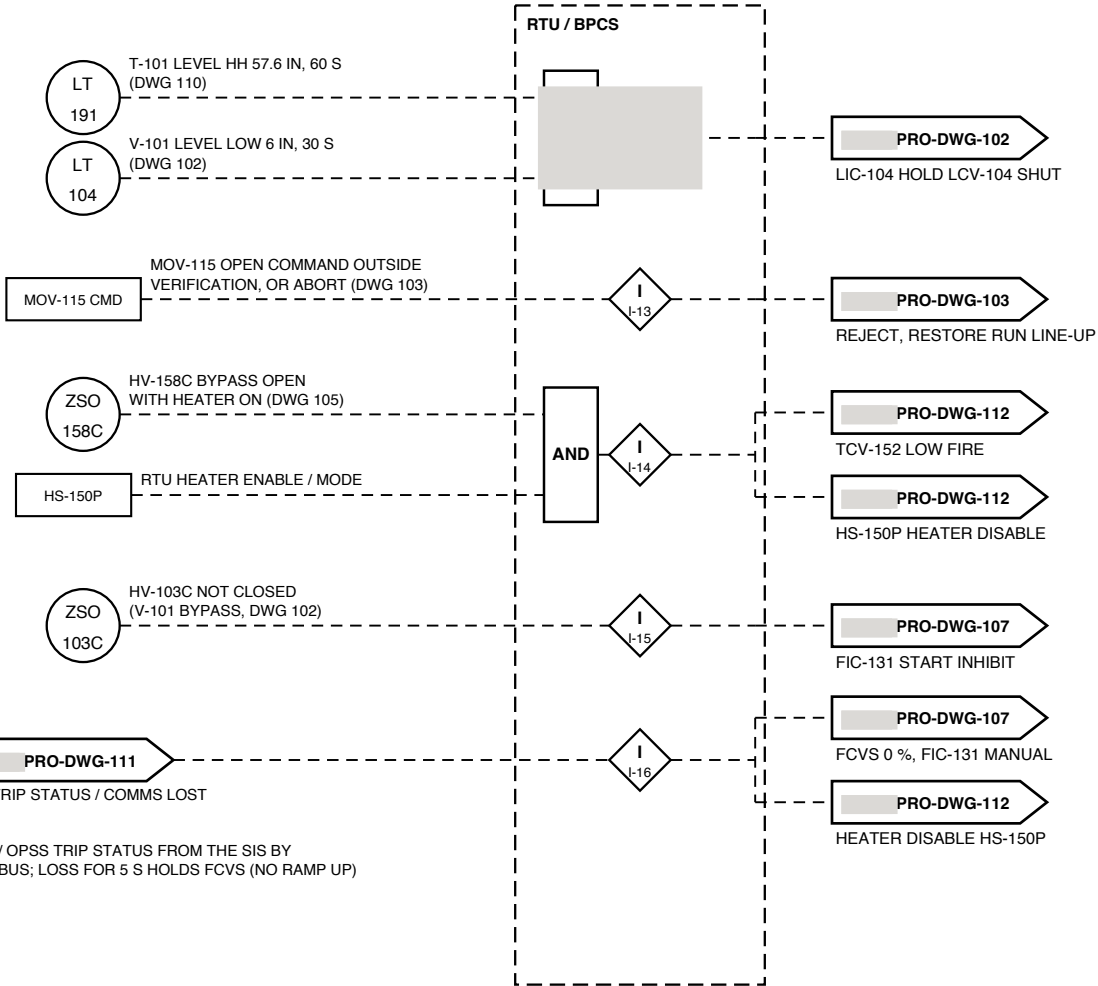
REF: PRO-DWG-111 (SIS LOGIC)

REVISIONS

REV	DATE	DESCRIPTION	BY	CHK	APP
A	2026-09-29	ISSUED FOR REVIEW (IFR)			

PRELIMINARY - ISSUED FOR REVIEW - NOT FOR CONSTRUCTION

BPCS PERMISSIVES AND STATION ALARMS



ALARM-ONLY INPUTS (TO RTU, SCADA ALARM)

FSL 208 B-101 AIRFLOW LOW (ALSO I-09, DWG 111)

XS 209 UTILITY POWER FAIL / ATS POSITION

XA 210 UPS COMMON ALARM

ZS 211 GATE / BUILDING INTRUSION

TT 208A B-101 SHELTER TEMP TAH 104 F / TAL 50 F

TSH 161B E-161 ELEMENT HIGH TEMP CUTOUT (DWG 106)

XA 161 E-161 COMMON ALARM (DWG 106)

PSL 141L GC CARRIER GAS LOW (DWG 104)

NOTES

- BPCS FUNCTIONS ARE NOT CREDITED AS INDEPENDENT PROTECTION LAYERS UNLESS STATED IN THE LOPA (SAF-RPT-002).
- I-07: ALARM LIMITS AND SHUT-IN LIMITS PER INS-LST-004 SECTION 6 AND BASIS 5.2 (HOLD H-13). FIC-131 RAMPs AT 10 MMSCFD/MIN; BELOW 1 MMSCFD FOR 60 S THE RTU SENDS XY-103Q AND THE SIS CLOSES SDV-103. RESTART NEEDS 30 MIN IN SPEC AND A SUPERVISOR RESET.
- I-10: DUTY VALVE FAILED IF ZT DEVIATES FROM DEMAND BY MORE THAN 5 % FOR 30 S; STANDBY TAKES FY-131 BUMPLESSLY.
- I-11 IS A BPCS BACKSTOP BELOW THE OPSS (I-02, 1,225 PSIG) AND IS NOT AN IPL FOR FCV FAILURE.
- I-13: SERIES VERIFICATION RUNS AT CASE C2 RATES OR LOWER. STANDBY RUN OUTLET MOV STAYS OPEN.
- I-14: HEATER-OUT WHILE BYPASS OPEN DRIVES TCV-152 TO LOW FIRE. TIC-152 SETPOINT IS PRESSURE-COMPENSATED.
- ALARM PRIORITIES AND DELAYS PER INS-LST-003.

ENGINEER OF RECORD SEAL

NOT SEALED
PRELIMINARY

PE NO. _____

PROJECT

120 MMSCFD RECEIPT INTO _____
COUNTY, _____

DISCIPLINE: PROCESS
SCALE: NTS

P&ID BPCS INTERLOCKS AND ALARMS

RTU INTERLOCKS I-07, I-10 TO I-16, STATION ALARMS

DRAWN: ____ CHECKED: ____ APPROVED: ____

DWG NO. PRO-DWG-113

SHEET 1 OF 1 REV A