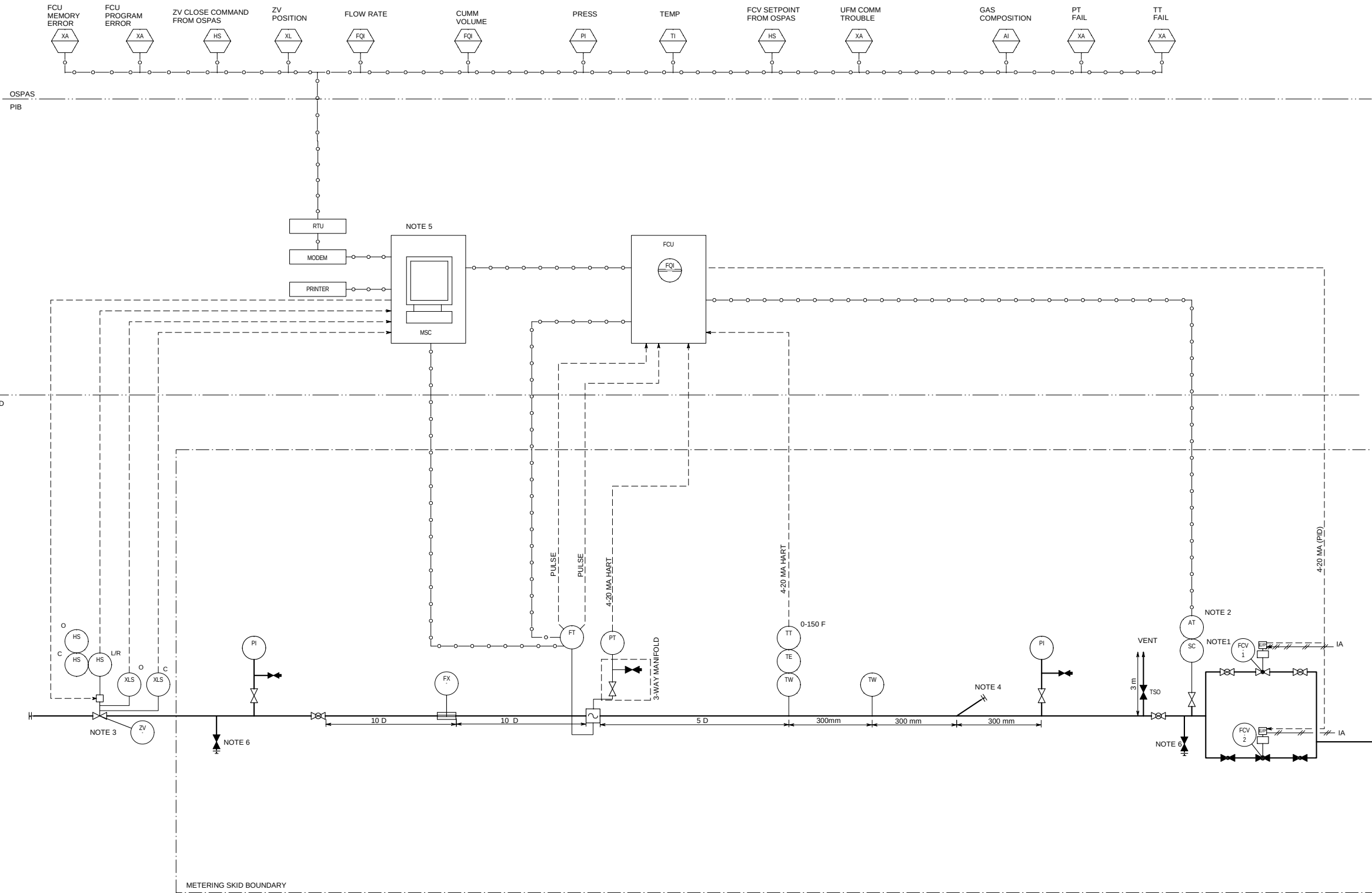




- NOTES:
1. SAMPLE CONNECTION AS PER SA STANDARD DRAWING AC-036045.
 2. AT TO BE A GC. UNLESS A REPRESENTATIVE GAS COMPOSITION CAN BE OBTAINED FROM AN ONLINE GC INSTALLED AT A COMMON GAS SUPPLY HEADER. IN THIS CASE THE PROPONENT MAY REQUEST A FLOW-BASED COMPOSITE SAMPLER. IN EITHER CASE THE OUTLET OF PROBE SHALL HAVE A CONNECTION FOR MANUAL SAMPLING.
 3. PROVIDED BY OTHERS.
 4. UFM INSPECTION POINT.
 5. MSC LOADED WITH HMI AND USM AND FLOW COMPUTER CONFIGURATION AND DIAGNOSIS PACKAGES.
 6. VALVE NOT NEEDED WHEN A TOTAL SHUTDOWN OF THE METERING SYSTEM IS ACCEPTABLE.

PIPING MATERIAL SPECIFICATION S454-005		LEGEND	
		INSTRUMENT DEFINITION & SYMBOLS S454-004	
PROCESS LINE	—	ACAFD	AIR TO CLOSE
INSTRUMENT	—	ACAFS	AIR FAILURE OPEN
AIR LINE	—	ACAFS	AIR TO CLOSE/STAY
INSTRUMENT	—	ACAFS	AIR TO OPEN
ELECTRICAL LINE	—	ACAFS	AIR FAILURE CLOSE
REDUCER	—	ADV	AIR TO OPERATOR
SPECTACLE	—	ADV	AIR OPERATED VALVE
PLATE OPEN	—	AT	ANALYZER TRANSMITTER
PLATE CLOSED	—	DT	DENSITY TRANSMITTER
GATE VALVE	—	ESD	EMERGENCY SHUTDOWN SYSTEM
CHECK VALVE	—	FC	FLOW CONTROLLER
DOUBLE DISC	—	FCV	FLOW CONTROL VALVE
ANGLE VALVE	—	FCV	FLOW CONTROL VALVE
PRESSURE RELIEF VALVE	—	FCV	FLOW CONTROL VALVE
VACUUM RELIEF VALVE	—	FCV	FLOW CONTROL VALVE
MOTOR OPERATED VALVE	—	FCV	FLOW CONTROL VALVE
PISTON OPERATED VALVE	—	FCV	FLOW CONTROL VALVE
CONTROL VALVE	—	FCV	FLOW CONTROL VALVE
VALVE NORMALLY CLOSED	—	FCV	FLOW CONTROL VALVE
ULTRASONIC FLOW METER	—	FCV	FLOW CONTROL VALVE
FLOW CONDITIONING PLATE	—	FCV	FLOW CONTROL VALVE
TSO	—	FCV	FLOW CONTROL VALVE
S.C.	—	FCV	FLOW CONTROL VALVE
OWS	—	FCV	FLOW CONTROL VALVE
D	—	FCV	FLOW CONTROL VALVE
V	—	FCV	FLOW CONTROL VALVE

REFERENCE DRAWINGS	
LETTER IDENTIFICATION OF LINES	AE-03604
PIPING SYMBOLS	AB-03627
EQUIPMENT SYMBOLS	AB-03635
INSTRUMENT SYMBOLS	AC-03650
PIPING LAYOUT INDEX	
PLOT PLAN	
PROCESS FLOW DIAGRAM	
HYDROSTATIC TEST DIAGRAM	
DRAWING CONTROL FOR J.O.	
INSTRUMENT INSTALLATION SCHEDULES	

REVISION VALIDATION	
THIS REVISION NO. 00 IS COVERED, FOR ALL APPROVAL AND CERTIFICATION REQUIREMENTS, PER SAEP-334, UNDER DRAWING COMPLETION CERTIFICATE NO. 768530-0810-002	
DESIGN CERTIFICATION (DESIGN AGENCY)	REVIEW FOR KEY DRAWINGS (SAUDI ARAMCO)
ENGINEER DATE	CERTIFIED BY DATE
REV. NO.	DATE
REVISION DESCRIPTION	
JOB ORDER/REV. NO. 10-00912	
THIS REVISION IS NOT TO BE USED FOR CONSTRUCTION UNTIL CERTIFIED AND DATED	
SAUDI ARABIAN OIL COMPANY	
PIPING & INSTRUMENTATION DIAGRAM	
ULTRASONIC FLOW METER BASED	
SPPID Template_Plant01	
PLANT NO.	INDEX
990	A
DRAWING NUMBER	SAUDI ARABIA
AB-036183	001
REV. NO.	00