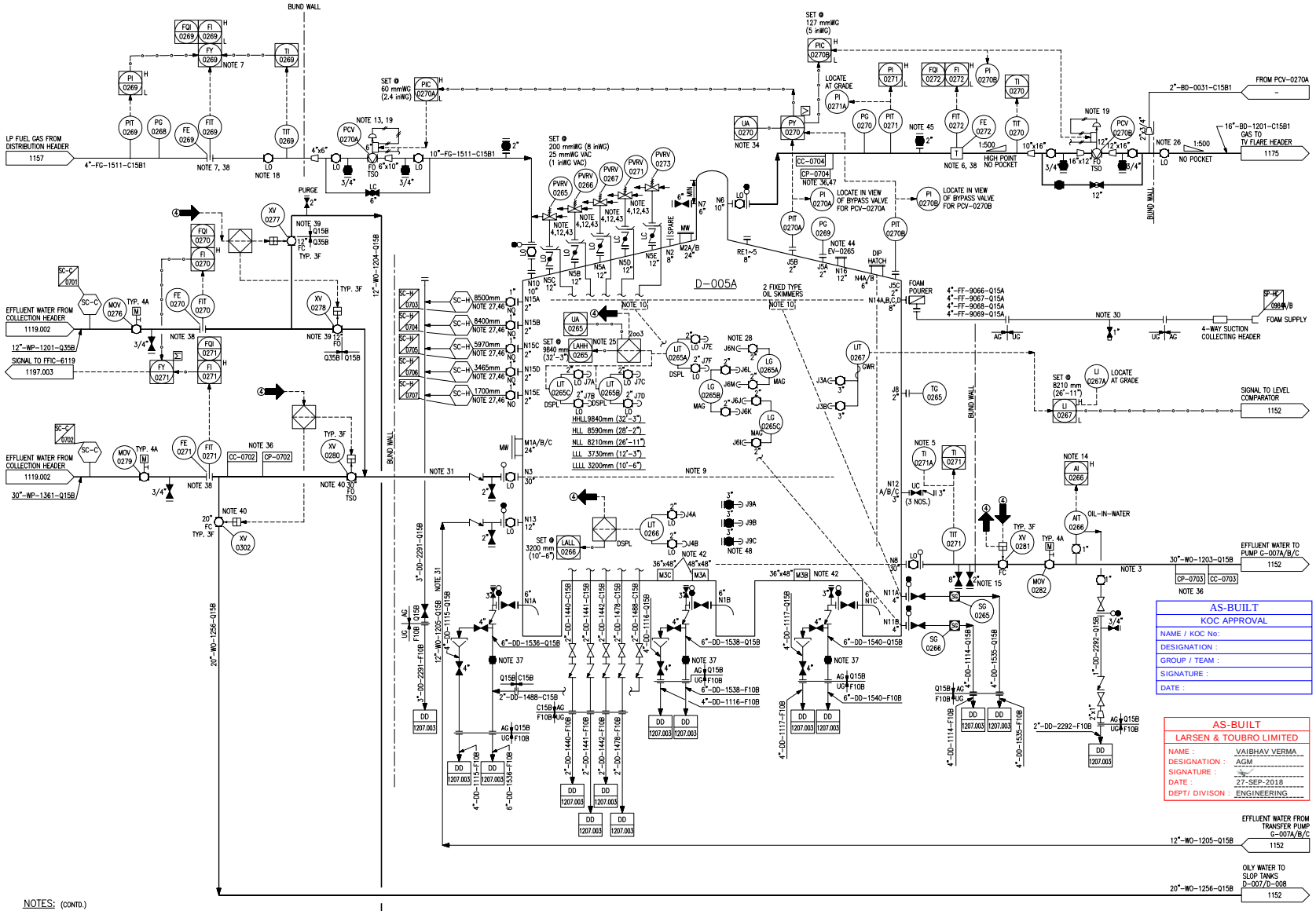
D-005A

EFFLUENT WATER BALANCE TANK

CAPACITY m3 (BBLS)	: 16,711 (105111)
ID mm (ft.-in)	: 46500 (152'-7")
HEIGHT mm (ft.-in)	: 11400 (37'-5")
OP PRESS /DES PRESS MMWG (IN WG)	: 50~127/254/-38 (2~5/10/-1.5)
OP TEMP/DESIGN TEMP °C (°F)	: 15~55/93/-3 (59~131/200/27)
UTC NO.	:
TRIM NO.	: DT-D005A-Q15B/C15B1/Q35B/C35B1



NOTES: (CONTD.)

43. ONLY ONE PVRV TO BE REMOVED AT A TIME FOR MAINTENANCE/INSPECTION, WHEN TANK IS IN SERVICE.
44. EMERGENCY VENT VALVE ONE IS INSTALLED & ONE IS WAREHOUSE SPARE.
45. PURGE CONNECTION IS PROVIDED ON TANK VAPOUR OUTLET LINE.
46. TRICOCK ELEVATIONS ARE ALIGNED WITH TANK LEVEL.
47. ONE ADDITIONAL INTERNAL CORROSION MONITORING PROBE SHALL BE INSTALLED AT THE TOP AT 12'O CLOCK POSITION.
48. J9A/B/C SPARE NOZZLE ELEVATIONS:-
    J9A : 10210 mm FROM THE BOTTOM OF THE TANK
    J9B : 6530 mm FROM THE BOTTOM OF THE TANK
    J9C : 2847 mm FROM THE BOTTOM OF THE TANK

GENERAL NOTES:

A. FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & .002.
B. ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530-.
C. ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030-.
D. FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.002, .003, .004, .005, .006 & .007.
E. FOR MISCELLANEOUS PIPING TYPICAL VALVING, DRAINAGE & GENERAL ARRANGEMENT OF LEVEL INSTRUMENTS, PUMPS, STRAINERS & CONTROL VALVES SEE DRAWINGS 50489-530-020-PID-1108.001 TO 1108.010.
F. DRAWING NUMBERS SHOWN IN P&ID CONTINUATION BOXES ARE ABBREVIATED SHOWING DRAWING SEQUENTIAL NUMBERS ONLY. THE FULL FORM OF THE DRAWING NUMBER IS 50489-530-020-PID-XXXX.SHT.NO.
G. FOR MATERIAL SELECTION DIAGRAM SEE DRAWINGS 50489-530-020-MSD-1001.001 TO 1023.
H. DETAIL NUMBERING FOR CI, SC, CC & CP SEE DRAWING 50489-530-020-PID-1108.003.
I. PAINTING & COATING ARE IN ACCORDANCE WITH KOC-P-001.
J. LOW POINT DRAIN & HIGH POINT VENT ARE INDICATED IN P&ID.
K. FOR CAUSE & EFFECT REFER DOC. NO. 50489-530-020-PHL-1009.
L. FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.

NOTES:

1. DELETED.
2. FOR CHEMICAL INJECTION NOZZLE DETAIL SEE STANDARD DWG. 50489-530-020-PID-1108.001
3. PUMP SUCTION AND DISCHARGE MANIFOLD AND HEADER ARE SIZED FOR 320,000 BWPD.
4. DRIP PAN FOR PVRV PIPE IS CONNECTED TO TANK BASE.
5. TI-0271 LOCATED CLOSE TO D-005A.
6. CONSIDERING VERY LOW PRESSURE DROP AVAILABILITY PRESENCE OF DROPLETS CARRIED OVER INTO THE GAS STREAMS AND THE REQUIRED ACCURACY, INSERTION TYPE THERMAL MASS FLOW METER IS USED.
7. FY PROVIDES PRESSURE AND TEMPERATURE COMPENSATION FOR FQI.
8. DELETED.
9. DISTRIBUTOR IS PROVIDED FOR UNIFORM DISTRIBUTION OF EFFLUENT WATER OVER CROSS SECTIONAL AREA OF TANK.
10. FIXED TYPE OF OIL COLLECTOR PIPE SYSTEM IS PROVIDED IN BETWEEN HLL & NLL.
11. DELETED.
12. PVRV IS N+2 WITH FLAME ARRESTOR & AS PER KOC-MV-007 CL 9.6.
13. THE CAPACITY OF CONTROL VALVES IS NOT MORE THAN PVRV OUTBREATHING CAPACITY. 5405.36 Nm3/hr (4.84 MMSCFD).
14. OIL IN WATER ANALYSERS PROVIDED.
15. MOBILE PUMP CONNECTION.
18. LOCATE AT GRADE.
19. LOCATE ON THE ROOF OF TANK.
16,17,20,21,22,23,24. DELETED.
25. 2 OUT OF 3 VOTING.
26. THE ISOLATION VALVE FOR TANK VAPOUR LOCATED NEAR TO TV FLARE HEADER.
27. FOR SAMPLE NOZZLE DETAIL SEE STANDARD DWG. 50489-530-020-PID-1108.001
28. MULTIPLE LEVEL GAUGES ARE PROVIDED TO COVER ALL OPERATING RANGES.
29. DELETED.
30. FOR DETAILS OF TANK AREA FIRE PROTECTION SYSTEMS & PIT LOCATION REFER TO DRAWING 50489-530-000-PID-1133.
31,32,33. DELETED.
34. DEVIATION OF PIT-0270A/B OUTPUT OF 5% INITIATES ALARM.
35. DELETED.
36. FOR CORROSION MONITORING STATIONS (CMS):-
    (a) CMS ARE INSTALLED AS PER KOC-MP-035.
    (b) PROPER ACCESS PIT OR PLATFORM ARE PROVIDED FOR RETRIEVAL OF COUPON/PROBE.
    (c) MATERIAL FOR CMS ARE PROCURED FROM KOC APPROVED VENDOR LIST.
    (d) CMS ARE LOCATED IN BOTTOM 6 O'CLOCK POSITION.
    (e) TAG NUMBERING OF CMS IS AS PER APPENDIX-C OF KOC-MP-035.
37. ENSURE THAT LOCATION OF BALL VALVES PROVIDED ON THE DRAIN LINES CLOSE TO THE DIVERTING DRAIN TO THE FUNNEL.
38. STRAIGHT LENGTH REQUIRED
    (a) FOR ORIFICE FLOW METER : 20D UPSTREAM & 5D DOWNSTREAM
    (b) FOR THERMAL MASS FLOW METER : 10D UPSTREAM & 5D DOWNSTREAM
39. IN CASE OF HIGH-HIGH LEVEL (LAHH-0265) IN THE EFFLUENT WATER BALANCE TANK, EFFLUENT WATER FROM UPSTREAM OF TANK IS AUTOMATICALLY ROUTED TO SLOP TANK BY OPENING OF XV-0277 & CLOSING OF XV-0278.
40. IN CASE OF HIGH-HIGH LEVEL (LAHH-0265) IN THE EFFLUENT WATER BALANCE TANK, EFFLUENT WATER FROM UPSTREAM OF TANK IS AUTOMATICALLY ROUTED TO SLOP TANK BY OPENING OF XV-0302 & CLOSING OF XV-0280.
41. DELETED.
42. CLEAN OUT DOOR.

REV.	DESCRIPTION	DRAWN	CHECKED	HOD APPRD.	PEM	DATE
Z1	RE-ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	27.09.18
Z0	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	28.08.18
01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	02.11.16
0	ISSUED FOR CONSTRUCTION	HSH/PRS	AKG	SRA	RAK	24.05.16
D	ISSUED INCORPORATED CLIENT COMMENTS	HSH/VSA	AKG	SRA	RAK	19.04.16
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	14.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	30.05.15
B	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	19.02.15
A	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	05.12.14

CONTRACTOR REVISION

AS-BUILT
KOC APPROVAL
NAME / KOC No:
DESIGNATION :
GROUP / TEAM :
SIGNATURE :
DATE :

AS-BUILT
LARSEN & TOUBRO LIMITED
NAME : VAIBHAV VERMA
DESIGNATION : AGM
SIGNATURE :
DATE : 27-SEP-2018
DEPT/ DIVISON : ENGINEERING

KUWAIT OIL CO. K. S. C.
شركة نفط الكويت ش.م.ك.

CONTRACTOR DETAILS:-
LARSEN & TOUBRO LIMITED
FARIDABAD

PROJECT TITLE:-
NEW GATHERING CENTRE GC-30
IN NORTH KUWAIT

DOCUMENT TITLE:-
PIPING & INSTRUMENTATION DIAGRAM
EFFLUENT WATER BALANCE TANK D-005A

PROJECT NO.	DRAWING NO.			
EF1902	CONTRACTOR DRG. NO.	REV.	KOC DRG. NO.	REV.
	50489-530-020-PID-1151.001	Z1		
	SHEET NO. 1 OF 2		SHEET NO.	
	COMPANY DRG. NO.	REV.		
	EF1902-530-DCO-PID-0151.001	A4		
	SHEET NO.			

A1