



- NOTES: (CONT'D.)
42. ENSURE THAT LOCATION OF BALL VALVES PROVIDED ON THE DRAIN LINES CLOSE TO THE DIVERTING DRAIN TO THE FUNNEL.
 43. DISTRIBUTOR PIPE.
 44. PURGE CONNECTION IS PROVIDED ON TANK VAPOUR OUTLET LINE.
 45. ONLY ONE PVRV IS TO BE REMOVED AT A TIME OF MAINTENANCE/INSPECTION WHEN TANK IS IN SERVICE.
 46. EMERGENCY VENT VALVE, ONE SHALL BE INSTALLED & ONE SHALL BE WAREHOUSE SPARE.
 47. J10A/B/C SPARE NOZZLE ELEVATIONS:-
J10A: 300 mm FROM TOP OF THE TANK
J10B: CENTER FROM TOP OF THE TANK & BOTTOM NOZZLE
J10C: 500 mm ABOVE THE BOTTOM OF THE TANK
 48. ONE ADDITIONAL INTERNAL CORROSION MONITORING POINT SHALL BE INSTALLED AT THE TOP AT 12 O'CLOCK POSITION.
 49. VENT LINE SHALL BE EXTENDED TO 100mm ABOVE THE HEADER.
IT WILL BE USED AS VENT DURING MAINTENANCE PURPOSE WHEN TANK ISOLATION VALVE & VENT/ESDV WILL BE IN CLOSED POSITION.
SAME ARRANGEMENT WILL BE APPLICABLE FOR TANK D-001/002/003, D-006A/B, D-007/008.
 50. 2" VENT ALONG WITH FLANGE CONNECTION WILL BE PROVIDED AS LOOSE SUPPLY BY L&T.

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, SEE XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, 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 CL, 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-PHIL-1009.
- L. FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.

NOTES:

1. DELETED.
2. MAXIMUM CAPACITY TANK BOTTOM TO HILL.
3. FIXED OIL SKIMMER ELEVATION IS IN BETWEEN HLL & NLL.
4. IF VALVE XV-0375 IS NOT FULLY OPEN, THE ASSOCIATED PUMP (G-011A/B/C) IS INHIBITED FROM STARTING, OR IF RUNNING STOPPED.
5. THERMAL MASS FLOW METER.
6. DELETED.
7. DRIP PAN FOR PVRV PIPE IS CONNECTED TO TANK BASE.
8. PVRV IS N+2 WITH FLAME ARRESTOR & AS PER KOC-M-007 CL 9.6.
9. CAPACITY OF CONTROL VALVE IS NOT MORE THAN PVRV OUT BREATHING CAPACITY.
10. SUCTION LINE IS SIZED FOR BOTH PUMPS OPERATING ONE TANK.
11. MOBILE PUMP CONNECTION.
12. THE ISOLATION VALVE FOR TANK VAPOUR LOCATED NEAR TO TV FLARE HEADER.
13. TANK BOTTOM DRAIN NOZZLE FLUSHING.
14. LOCATED ON THE GROUND.
15. LOCATED ON THE ROOF OF TANK.
- 16, 17, 18. DELETED.
19. TRICOCK ELEVATIONS IS ALIGNED WITH TANK LEVEL.
20. DELETED.
21. HS-0365 (PID 1153-001) IS USED FOR THREE OPERATING MODES OF TREATED WATER TANK
(a) SINGLE TANK OPERATION D-006A
(b) SINGLE TANK OPERATION D-006B
(c) PARALLEL TANK OPERATION D-006A/D-006B
22. HIGH HIGH LEVEL IN EITHER TANK, D-006A (LAHII-0367 PID 1153.001) OR D-006B (LAHII-0370) SHALL OPEN XV-0330 AND CLOSE XV-0299 BOTH VALVES SHOWN ON P&ID-1273.
23. FY PROVIDES PRESSURE AND TEMPERATURE COMPENSATION FOR FO.
24. MULTIPLE LEVEL GAUGES ARE PROVIDED TO COVER ALL OPERATING RANGES.
25. FOR SAMPLE NOZZLE DETAIL SEE STANDARD DWG. P&ID 1108.001
26. DELETED.
27. FOR DETAILS OF TANK AREA FIRE PROTECTION SYSTEMS & PIT LOCATION REFER TO DRAWING P&ID 50489-530-000-PID-1115.
28. IN LINE OXYGEN ANALYSERS ARE INSTALLED. PROBES ARE 100% SPARED.
29. O₂ PROBES ARE ONLINE RETRIEVABLE.
30. PIPE IS EXTENDED TO 200mm ABOVE HILL IN TANK TO PROVIDE OVERFLOW. PIPE TO DISCHARGES INTO BUND.
31. DERIVATION OF PIT-0369A/B OUTPUT BY 5% INITIATES ALARM.
32. DELETED.
33. AT LEAST MOV-0372 & MOV-373 OR MOV-0367 & MOV-0368 (PID-1153.001) MUST ALWAYS OPEN.
34. DELETED.
35. UT-0369 WILL COVER THE WHOLE LEVEL RANGE OF THE TANK.
36. MSA & M3B ARE CLEAN OUT DOORS.
37. FOR CORROSION MONITORING STATIONS (CMS):-
(a) CMS IS INSTALLED AS PER KOC-MP-035.
(b) PROPER ACCESS PIT OR PLATFORM ARE PROVIDED FOR RETRIEVAL OF COUPEN/PROBE.
(c) MATERIAL FOR CMS ARE PROCURED FROM KOC APPROVED VENDOR LIST.
(d) CMS IS LOCATED IN BOTTOM 6 O'CLOCK POSITION.
(e) TAG NUMBERING OF CMS ARE AS PER APPENDIX-C OF KOC-MP-035.
38. STRAIGHT LENGTH REQUIRED
(a) FOR ORIFICE FLOW METER: 200 UPSTREAM & 50 DOWNSTREAM
(b) FOR THERMAL MASS FLOW METER: 100 UPSTREAM & 50 DOWNSTREAM
39. DELETED.
40. HIGH POINT VENT.
41. DELETED.

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
21	RE-ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	27.09.18
20	ISSUED FOR AS-BUILT	BAK/SSI	AKG	SRA	RAK	25.08.18
01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	02.11.16
0	ISSUED FOR CONSTRUCTION	HSI/VSA	AKG	SRA	RAK	28.03.16
D	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	22.12.15
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
BK	ISSUED FOR IDO	BAK/VSA	AKG	SRA	RAK	05.02.15
A	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	05.12.14

CONTRACTOR REVISION

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 TREATED WATER TANK D-006B**

PROJECT NO.	DRAWING NO.	REV.
EF1902	CONTRACTOR DRG. NO. 50489-530-020-PID-1153.004 SHEET NO. 4 OF 23 COMPANY DRG. NO. EF1902-530-DCO-PID-0153.001 SHEET NO.	REV. KOC DRG. NO. Z1 SHEET NO.