



GENERAL NOTES:

- A. FOR STANDARD SYMBOLS AND NOME.LATURE 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-1106.001, .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 CI, SC, CC & CP SEE DRAWING 50489-530-020-PID-1108.003.  
I. PAINTING & COATING ARE IN ACCORDA.E 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. AUTOMATIC VARIABLE PUMP STROKE ADJUSTMENT IS THROUGH DCS.  
3. DELETED.  
4. VALVE CLOSES AT HIGH LIQUID LEVEL H1 (SET @2080mm) VALVE OPENS AT LOW LIQUID LEVEL L1 (SET @420mm). ZSC OF LCV-6068, LCV-6083, LCV-6092 & LCV-6104 STOPS DUTY & STANDBY TRANSFER PUMP G-023A/B BY SSLS LOGIC.  
5. DELETED.  
6. DELETED.  
7. LOW LOW LIQUID LEVEL STOPS SCALE INHIBITOR INJECTION PUMPS G-039A/B.  
8. FLUSHING CONNECTIONS.  
9. SCALE INHIBITOR DAY TANK COMES UNDER BUND AREA & SCALE INHIBITOR INJECTION PUMP IS PART OF PUMP SKID.  
10. EYEWASH AND SAFETY SHOWERS ARE PROVIDED IN THE CHEMICAL INJECTION SKID AREA.  
11. PROVIDE CORIOUS FLOW MEASUREMENT AND FACILITY FOR LOCAL CALIBRATION.  
12. TANK LEVEL INSTRUMENTS ARE CALIBRATED IN VOLUMETRIC UNITS.  
13. DELETED.  
14. HIGH HIGH LIQUID LEVEL STOPS SCALE INHIBITOR TRANSFER PUMP G-023A/B.  
15. TANK BUND NOT IN VENDOR SCOPE. TANK CONCRETE BUND SHALL BE 115% CONTAINMENT OF D-038.  
16. DEVIATION ALARMS ARE CONFIGURED IN THE DCS TO ALARM IF ACTUAL FLOW DIFFERS FROM SET BY 10%.  
17. FLAME ARRESTOR INSTALLED WITH GOOSE NECK PIPE FOR VENT.  
18. DELETED.  
19. DELETED  
20. CHEMICAL INJECTION RATIO CONTROLLER IS SET IN PPM.  
21. OPTIONAL CHEMICAL INJECTION POINT.  
22. ANTI-RESISTANT CHEMICAL FLOOR TO BE PROVIDED.  
23. OVERFLOW NOZZLE IS LOCATED ABOVE HHLL.  
24. TANK AREA ARE PAVED. FLOOR IS SLOPED TOWARDS SUMP PIT.  
25. VENT TO SAFE LOCATION ARE AS PER KOC-G-002 ALONG WITH GOOSE NECK & BIRD SCREEN.  
26. (A) LOW POINT DRAIN IS PROVIDED AS APPROPRIATE.  
(B) DELETED.  
27. CHEMICAL PUMPOUT CONNECTION.  
28. PUMP SUCTION BALL VALVE & CALIBRATION POT BALL VALVE ARE LOCATED ADJACENT TO ONE ANOTHER FOR MEASURING THE FLOW.  
29. PUMPS ARE PROVIDED WITH DIAPHRAGM RUPTURE ALARM (PAHH).  
30. VACUUM TRUCK CONNECTION (PIPE & VALVE) : L&T SCOPE  
31. PAHH STOPS PRODUCED WATER SCALE INHIBITOR INJECTION PUMP.  
32. DIRECT MOUNTING TO THE PUMP HEAD FOR DETECTING RUPTURE OF DIAPHRAGM.  
33. CHEMICAL SKID DRAIN LINE TILL INLINE TEE CONNECTION IS IN L&T SCOPE.  
34. MINIMUM STROKE OF 10% IS PROVIDED FOR ALL CHEMICAL INJECTION PUMP.

Z0	ISSUED FOR AS-BUILT	BAK/CHS	AKG	SRA	DER	18.08.18
01	ISSUED FOR CONSTRUCTION	BAK/CHS	AKG	SRA	DER	20.12.16
0	ISSUED FOR CONSTRUCTION	HSR/CHS	AKG	SRA	RAK	06.06.16
D	ISSUED I. ORPORATED CLIENT COMMENTS	HSR/CHS	AKG	SRA	RAK	07.04.16
C	ISSUED INCORPORATED CLIENT COMMENTS	JSI/ABY	AKG	SRA	RAK	29.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	BAK/ABY	AKG	SRA	RAK	03.06.15
B	ISSUED INCORPORATED CLIENT COMMENTS	JSI/ABY	AKG	SRA	RAK	23.02.15
A	ISSUED FOR APPROVAL	PK/ABY	AKG	SRA	RAK	12.12.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE

CONTRACTOR REVISION

**KUWAIT OIL CO.**  
**K. S. C.**  
شركة نفط الكويت  
ش.م.ك.  
A Subsidiary of Kuwait Petroleum Corporation

CONTRACTOR DETAILS:-  
**LARSEN & TOUBRO LIMITED**  
FARIDABAD

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

DOCUMENT TITLE:-  
PIPING & INSTRUMENTATION DIAGRAM  
CHEMICAL INJECTION SKID #2 -SCALE INHIBITOR  
(D-039 & G-039A/B)

PROJECT NO.	DRAWING NO.	REV.	KOC DRG. NO.	REV.
50489-530-020-PID-1195.003	Z0			
SHEET NO. 3 OF 4				
COMPANY DRG. NO.	REV.			
EF1902-530-DCO-PID-0195.003	A3			
SHEET NO.				