



GENERAL NOTES:

- FOR STANDARD SYMBOLS AND NOMENCLATURE SEE DRAWINGS 50489-530-020-PID-1104.001 & .002.
  - ALL EQUIPMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 530-.
  - ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030-.
  - FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, .002, .003, .004, .005, .006 & .007.
  - 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.
  - 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.
  - FOR MATERIAL SELECTION DIAGRAM SEE DRAWINGS 50489-530-020-MSD-1001.001 TO 1023.
  - DETAIL NUMBERING FOR CI, SC, CC & CP SEE DRAWING 50489-530-020-PID-1108.003.
  - PAINTING & COATING ARE IN ACCORDANCE WITH KOC-P-001.
  - LOW POINT DRAIN & HIGH POINT VENT ARE INDICATED IN P&ID.
  - FOR CAUSE & EFFECT REFER DOC. NO. 50489-530-020-PHL-1009.
  - FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006.
- NOTES:
- DELETED.
  - AUTOMATIC VARIABLE STROKE PUMP ADJUSTMENT IS THROUGH DCS.
  - DELETED.
  - VALVE CLOSURES AT HIGH LIQUID LEVEL H1 (SET @1580mm) VALVE OPENS AT LOW LIQUID LEVEL L1 (SET @420mm). ZSC OF LCV-6071 STOPS DUTY & STANDBY TRANSFER PUMP G-024A/B BY SSSLS LOGIC.
  - DELETED.
  - LOW LIQUID LEVEL STOPS ANTI-FOAM INJECTION PUMPS G-035A/B/C/D AND AGITATOR A-035.
  - FLUSHING CONNECTIONS.
  - ANTI-FOAM DAY TANK COMES UNDER BUND AREA & ANTI-FOAM INJECTION PUMP IS PART OF PUMP SKID.
  - EYEWASH AND SAFETY SHOWERS ARE PROVIDED IN THE CHEMICAL INJECTION SKID AREA.
  - PROVIDE CORIOLIS FLOW MEASUREMENT AND FACILITY FOR LOCAL CALIBRATION.
  - TANK LEVEL INSTRUMENTS ARE CALIBRATED IN VOLUMETRIC UNITS.
  - DELETED.
  - HIGH HIGH LIQUID LEVEL STOPS ANTI-FOAM TRANSFER PUMPS G-024A/B.
  - TANK CONCRETE BUND IS 115% CONTAINMENT OF D-035.
  - DEVIATION ALARMS ARE CONFIGURED IN THE DCS TO ALARM IF ACTUAL FLOWRATE DIFFERS FROM SET BY 10%.
  - FLAME ARRESTOR INSTALLED WITH GOOSE NECK PIPE FOR VENT.
  - DELETED.
  - DELETED.
  - CHEMICAL INJECTION RATIO CONTROLLER IS SET IN PPM.
  - DELETED.
  - ANTI-RESISTANT CHEMICAL FLOOR IS PROVIDED.
  - EMERGENCY STOP PUSH BUTTON IS LOCATED AT SAFE DISTANCE.
  - OVERFLOW NOZZLE IS LOCATED ABOVE HHLL.
  - TANK AREA IS PAVED. FLOOR IS SLOPED TOWARDS SUMP PIT.
  - VENT TO SAFE LOCATION ARE AS PER KOC-G-002 ALONG WITH GOOSE NECK & BIRD SCREEN.
  - (A) LOW POINT DRAIN IS PROVIDED AS APPROPRIATE.  
(B) DELETED
  - CHEMICAL PUMP/OUT CONNECTION.
  - PUMP SUCTION BALL VALVE & CALIBRATION POT BALL VALVE ARE LOCATED ADJACENT TO ONE ANOTHER FOR MEASURING THE FLOW.
  - PUMPS ARE PROVIDED WITH DIAPHRAGM RUPTURE ALARM (PAHH).
  - VACUUM TRUCK CONNECTION (PIPE & VALVE) : L&T SCOPE
  - PAHH STOPS LP HEADER ANTI-FOAM INJECTION PUMP
  - DIRECT MOUNTING TO THE PUMP HEAD FOR DETECTING RUPTURE OF DIAPHRAGM.
  - CHEMICAL SKID DRAIN LINE TILL INLINE TEE CONNECTION IS IN L&T SCOPE.
  - MINIMUM STROKE OF 10% IS PROVIDED FOR ALL CHEMICAL INJECTION PUMP.

ZO	ISSUED FOR AS-BUILT	BAK/CHS	AKG	SRA	DER	12.09.18
O1	ISSUED FOR CONSTRUCTION	BAK/CHS	AKG	SRA	DER	19.12.16
O	ISSUED FOR CONSTRUCTION	HSH/CHS	AKG	SRA	RAK	09.06.16
D	ISSUED INCORPORATED CLIENT COMMENTS	PAK/CHS	AKG	SRA	RAK	08.04.16
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/SSI	AKG	SRA	RAK	23.02.15
A	ISSUED FOR APPROVAL	BAK/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.**

CONTRACTOR DETAILS:-

**LARSEN & TOUBRO LIMITED FARIDABAD**

PROJECT TITLE:-

**NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT**

DOCUMENT TITLE:-	PIPING & INSTRUMENTATION DIAGRAM
CHEMICAL INJECTION SKID #1 - ANTI FOAM	(D-035 & G-035A/B/C/D)
PROJECT NO.	DRAWING NO.
CONTRACTOR DRG. NO.	REV. KOC DRG. NO.
50489-530-020-PID-1194.004	ZO
SHEET NO. 4 OF 5	SHEET NO.
COMPANY DRG. NO.	REV.
EF1902-530-DCO-PID-0194.004	A2
SHEET NO.	