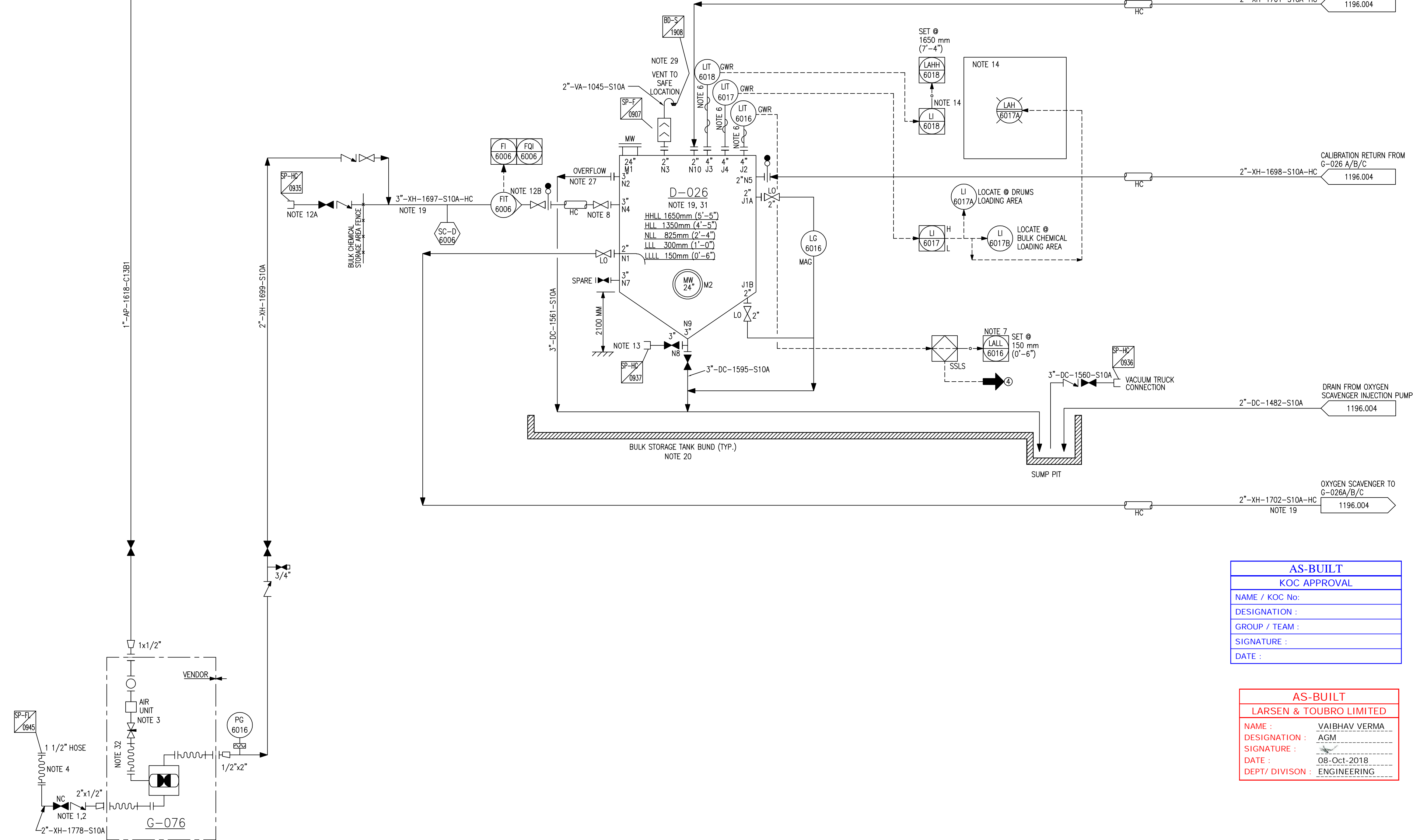


PLANT AIR FROM  
DISTRIBUTION HEADER  
1225.001



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

AS-BUILT	
LARSEN & TOUBRO LIMITED	
NAME :	VAIBHAV VERMA
DESIGNATION :	AGM
SIGNATURE :	
DATE :	08-Oct-2018
DEPT/ DIVISION :	ENGINEERING

## 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 PRIFIXED BY 530--.
- ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRIFIXED BY 030--.
- FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV AND ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, .002, .003, .004, .005, 006 & 007.
- FOR MISCELLANEOUS PIPING TYPICAL VALVING, DRAINAGE AND GENERAL ARRANGEMENT OF LEVEL INSTRUMENTS, PUMPS & CONTROL VALVES SEE DRAWING 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:

- FLEXIBLE HOSE WITH LONG PIPE END IS INSERTED INTO CHEMICAL DRUM FOR UNLOADING.
- UTILITY STATION IS PROVIDED IN DRUM UNLOADING AREA.
- COMBINATION FILTER, REGULATOR, PRESSURE GAUGE AND LUBRICATOR.
- FLEXIBLE HOSE WITH DRY BREAK COUPLING IS CONNECTED TO HARD PIPE WITH 2"x1 1/2" REDUCING FLANGE FOR CONNECTION TO DRUM / SEMI -BULK CONTAINER (APPLICABLE FOR ALL BULK STORAGE TANK).
- TWO SPARE PUMPS G-080 AND G-081 WITH ALL THE ANCILIARIES ARE LOCATED IN THE MAINTENANCE BUILDING.
- GWR TYPE LEVEL TRANSMITTER.
- LOW LOW LIQUID LEVEL STOPS OXYGEN SCAVENGER INJECTION PUMPS.
- LOCATE VALVE WITHIN SIGHT OF LEVEL GAUGE.
- DELETED.
- A. CHEMICAL TANKER LOADING CONNECTION.  
B. TRANSMITTER IS PROVIDED WITH LOCAL COUNTER WHICH IS RESETTABLE INSTANTANEOUS AND NON-RESETTABLE TOTAL INDICATIONS.
- CHEMICAL PUMP OUT CONNECTION TO BE EASILY ACCESSIBLE.
- PROVIDE ANNUNCIATOR SCHEME TO SUIT REQUIREMENTS AS INDICATED.  
TANK HIGH LEVEL ALARM IS DEDICATED TO A SPECIFIC LEVEL.  
(A) ONE TEST (IN DCS) FOR ALL CHEMICAL BULK DELIVERY & DRUMS UNLOADING / TRANSFER AREA FLASHER & HORNS.  
ONE RESET (IN DCS) FOR ALL CHEMICAL BULK DELIVERY & DRUMS UNLOADING / TRANSFER AREA FLASHERS.  
ONE ACCEPT (IN DCS) FOR ALL CHEMICAL BULK DELIVERY & DRUMS UNLOADING / TRANSFER AREA HORNS.  
(B) TANK (D-021) AREA HAS INDIVIDUAL FLASHING RED LIGHT ON TANK LEVEL HIGH- TWO (2) COMMON HORNS XA-6035B/XA-6029A ON ANY TANK LEVEL HIGH-HIGH.  
(C) UNLOADING AREA-ONE COMMON FLASHER ON ANY TANK HIGH LEVEL (LAH-6034A) ONE COMMON HORN XA-6035A ON ANY TANK LEVEL HIGH HIGH.
- EYEWASH & SAFETY SHOWERS ARE TO BE INSTALLED AT LOADING CONNECTION OUTSIDE FENCE, CHEMICAL TRANSFER PUMP SHELTER AND BULK CHEMICAL STORAGE TANK/INJECTION PUMP SHELTER AREAS.
- DELETED.
- OXYGEN SCAVENGER SHALL BE STORED BELOW 60°C. INJECTION PUMP SUCTION LINE SHALL BE KEPT TO A MINIMUM. BULK STORAGE TANK, PUMP SUCTION AND DISCHARGE SHALL BE PROTECTED FROM DIRECT SUNLIGHT.
- TANK CONCRETE BUND IS 115% CONTAINMENT OF D-026.
- DELETED.
- LOW POINT DRAINS ARE PROVIDED AS APPROPRIATE DURING DETAILED DESIGN.
- DRAINAGE/SPILLAGE FROM TANK ARE COLLECTED INTO SUMP PIT.
- ANTI-RESISTANT CHEMICAL FLOOR BASED IS REQUIRED.
- OVERFLOW NOZZLE IS LOCATED ABOVE HHLL.
- PUMP & TANK AREA ARE PAVED. FLOOR IS SLOPED TOWARDS BUND PIT.
- VENT TO SAFE LOCATION ARE AS PER KOC-G-002.
- (A) LOW POINT DRAIN IS PROVIDED AS APPROPRIATE.  
(B) DRAINAGE/SPILLAGE COLLECTION & DISPOSAL FACILITY ARE PROVIDED.
- LIQUID LEVEL IS MEASURED FROM BOTTOM TANGENT LINE OF TANK.
- MATERIAL OF CONSTRUCTION FOR PLANT AIR FLEXIBLE HOSE IS SS-304.

Z1	ISSUED FOR AS-BUILT	HSB/VSA	AKG	SRA	RAK	08.10.18
Z0	ISSUED FOR AS-BUILT	HSB/VSA	AKG	SRA	RAK	01.09.18
01	ISSUED FOR CONSTRUCTION	HSB/VSA	AKG	SRA	RAK	23.11.16
0	ISSUED FOR CONSTRUCTION	HSB/VSA	AKG	SRA	RAK	01.04.16
C	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	21.10.15
OC	ISSUED INCORPORATED CLIENT COMMENTS	JSI/SSI	AKG	SRA	RAK	03.06.15
B	ISSUED INCORPORATED CLIENT COMMENTS	JSI/VSA	AKG	SRA	RAK	21.02.15
A	ISSUED FOR APPROVAL	BAK/ABY	AKG	SRA	RAK	12.12.14
REV.	DESCRIPTION	DRAWN	CHECKED	HOD APPRD.	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**  
**OXYGEN SCAVENGER STORAGE TANK (D-026) AND DISTRIBUTION**

PROJECT NO.	DRAWING NO.		
EF1902	CONTRACTOR DRG. NO.	REV.	KOC DRG. NO.
	50489-530-020-PID-1190	Z1	
	SHEET NO. 1 OF 1		SHEET NO.
	COMPANY DRG. NO.	REV.	
	EF1902-530-DCO-PID-0190.001	A4	
	SHEET NO.		