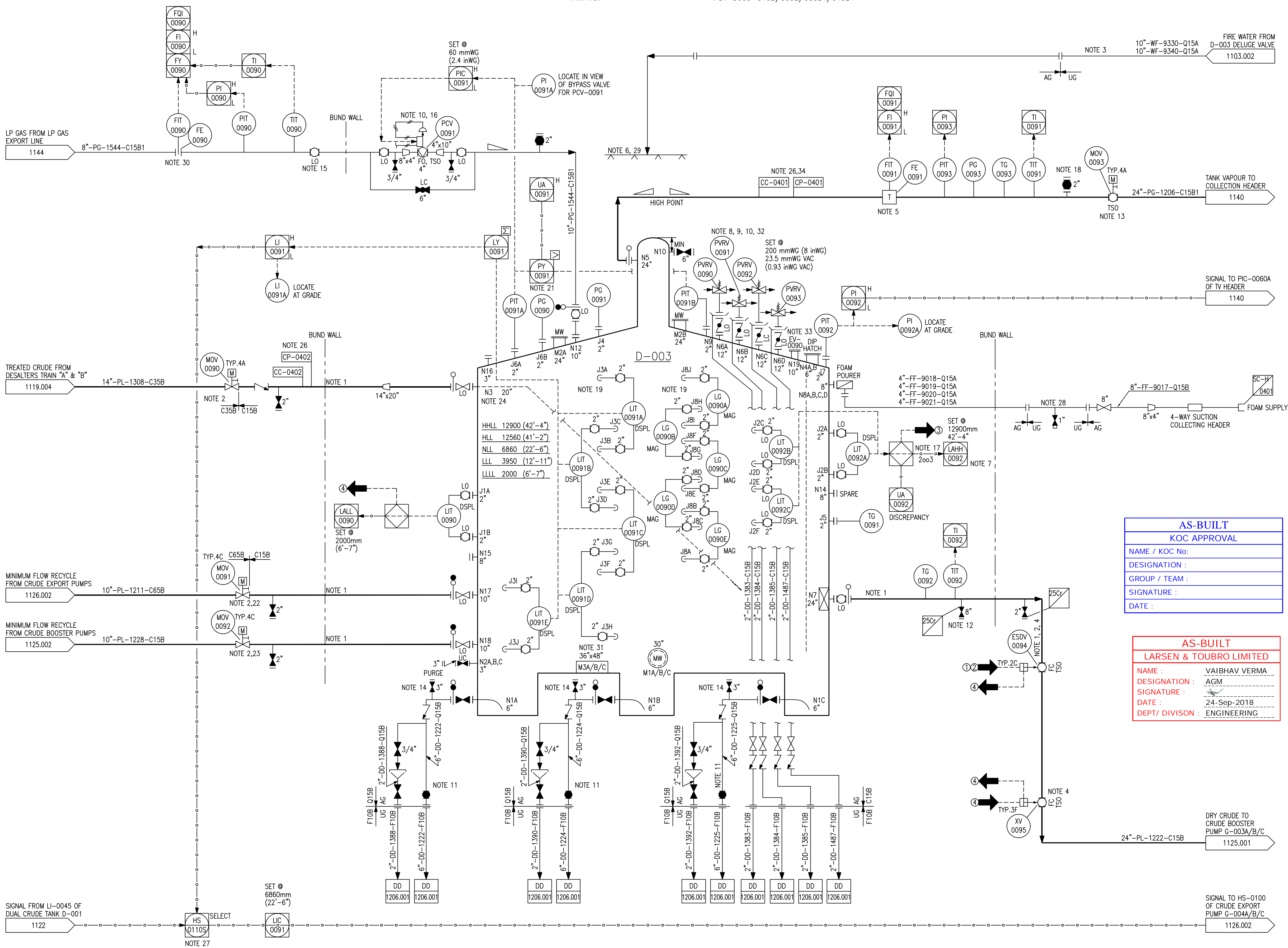


D-003
DRY CRUDE STORAGE TANK
CAPACITY m3 (BBLS) : 15936 (100240)
ID mm (ft.-in) : 39660 (130'-1")
HEIGHT mm (ft.-in) : 14400 (47'-3")
OP PRESS /DES PRESS MMWG (IN WG) : 50~127/254~38 (2~5/10~1.5)
OP TEMP/DESIGN TEMP °C (°F) : 15~65/93~3 (59~149/200~27)
UTC NO. :
TRIM NO. : DT-D003-C15B/C35B/C35B1/C15B1



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 530--.
- 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:

- HYDROCARBON A/G PIPING AND SUPPORT WITHIN TANK BUNDED AREA ARE FIRE PROOFED IN ACCORDANCE WITH PASSIVE FIRE PROTECTION LIST, 50489-530-000-LST-1003.
- EXTERNAL FIRE WATER DELUGE SPRAY RING IS AROUND GAS COLLECTION DOME.
- LAHH-0092 INITIATES DESALTER TRAINS SHUT DOWN (LEVEL 3).
- IF VALVE (ESDV-0094 & XV-0095) IS NOT FULLY OPEN, THE ASSOCIATED PUMP IS INHIBITED FROM STARTING OR, IF RUNNING, STOPPED.
- STRAIGHT LENGTH REQUIREMENT FOR THERMAL MASS FLOW METER ARE 10D UPSTREAM & 5D DOWNSTREAM.
- EXTERNAL FIRE WATER DELUGE SPRAY RING IS AROUND GAS COLLECTION DOME.
- LAHH-0092 INITIATES DESALTER TRAINS SHUT DOWN (LEVEL 3).
- DRIP PAN FOR PVRV PIPED IS CONNECTED TO TANK BASE.
- PVRV IS N+2 WITH FLAME ARRESTOR & AS PER KOC-MV-007 CL 9.6.
- a) CAPACITY OF PVRV FOR INBREATHING & OUTBREATHING IS 2420 Nm³/hr (2.16MMSCFD) & 4320 Nm³/hr (3.86 MMSCFD) RESPECTIVELY.
b) THE CAPACITY OF CONTROL VALVE IS NOT GREATER THAN PVRV OUTBREATHING REQUIREMENT.
- ENSURE THAT LOCATION OF BALL VALVES PROVIDED ON THE DRAIN LINES CLOSE TO THE DIVERTING DRAIN LINE TO THE FUNNEL.
- MOBILE PUMP CONNECTION.
- THE ISOLATION VALVE FOR TANK VAPOUR LOCATED NEAR TO TV HEADER.
- TANK BOTTOM DRAIN NOZZLE FLUSHING CONNECTION.
- LOCATE AT GRADE OUTSIDE OF DYKE.
- LOCATE ON THE ROOF OF TANK.
- 2 OUT OF 3 VOTING.
- PURGE CONNECTION IS PROVIDED ON TANK VAPOUR OUTLET LINE.
- MULTIPLE LEVEL INSTRUMENTS ARE PROVIDED TO COVER ALL OPERATING RANGES.
- DELETED.
- DEVIATION OF PIT-0091A/B OUTPUT BY 5% INITIATES ALARM.
- MOV-0091 AND MOV-0044 (P&ID-1122) OPERATED IN TANDEM - ALWAYS ONE VALVE OPEN.
- MOV-0092 AND MOV-0045 (P&ID-1122) OPERATED IN TANDEM - ALWAYS ONE VALVE OPEN.
- TREATED CRUDE INLET NOZZLE, BOTTOM OF PIPE, IS ABOVE HULL TO PREVENT BACKFLOW ON HULL TRIP.
- DELETED.
- 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.
- CMS ARE LOCATED IN BOTTOM 6 O'CLOCK POSITION.
- TAG NUMBERING OF CMS IS AS PER APPENDIX-C OF KOC-MP-035.
- HS-0110S IS FOR THE SELECTION BETWEEN OF DRY CRUDE TANK & DUAL CRUDE TANK (DRY MODE).
- FOR DETAILS OF FIRE PROTECTION SYSTEM & PIT LOCATION REF TO P&ID 50489-530-000-PID-1105.002.
- DELUGE WATER DEFLECTOR PLATE TO DIRECT WATER TO TANK SHELL IS PROVIDED AS PER KOC-L-009, REV-4.
- STRAIGHT LENGTH REQUIREMENT FOR ORIFICE FLOW METER ARE 20D UPSTREAM & 5D DOWNSTREAM.
- CLEAN OUT DOOR.
- ONLY ONE PVRV IS TO BE REMOVED AT A TIME OF MAINTENANCE/INSPECTION WHEN TANK IS IN SERVICE.
- EMERGENCY VENT VALVES: ONE SHALL BE INSTALLED & ONE SHALL BE WAREHOUSE SPARE.
- ONE ADDITIONAL INTERNAL CORROSION MONITORING POINT IS INSTALLED AT THE TOP AT 12 O'CLOCK POSITION.

AS-BUILT

KOC APPROVAL

NAME / KOC No:

DESIGNATION:

GROUP / TEAM:

SIGNATURE:

DATE:

AS-BUILT

LARSEN & TOUBRO LIMITED

NAME:

DESIGNATION:

SIGNATURE:

DATE:

DEPT/ DIVISION:

VAIBHAV VERMA

AGM

24-Sep-2018

ENGINEERING

REV.	DESCRIPTION	DRAWN	CHECKED	HOD	PEM	DATE
01	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	24.09.18
02	ISSUED FOR CONSTRUCTION	BAK/SSI	AKG	SRA	RAK	02.11.16
03	ISSUED FOR CONSTRUCTION	SHH/VSA	AKG	SRA	RAK	22.03.16
04	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	23.12.15
05	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	15.10.15
06	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	30.05.15
07	ISSUED INCORPORATED CLIENT COMMENTS	BAK/VSA	AKG	SRA	RAK	13.02.15
08	ISSUED FOR APPROVAL	BAK/VSA	AKG	SRA	RAK	29.11.14

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
DRY CRUDE STORAGE TANK (D- 003)

PROJECT NO.		DRAWING NO.		
EF1902	CONTRACTOR DRG. NO. 50489-530-020-PID-1124	REV.	KOC DRG. NO.	REV.
	SHEET NO. 1 OF 1	ZO	SHEET NO.	
	COMPANY DRG. NO. EF1902-530-DCO-PID-0124.001	REV.		
	SHEET NO.	A4		