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-. TR-1243 PU-1243 CP-1243 C. ALL INSTRUMENT NUMBERS SHOWN ON THIS P&ID ARE PRECEDED BY 030-. DF POWER UNIT DUAL FREQUENCY AUTO TRANSFORMER DF LRC-II PANEL D. FOR TYPICAL INSTRUMENT CONNECTION SBDV, XV, MOV & ESDV DETAILS SEE DRAWINGS 50489-530-020-PID-1106.001, .002, .003, .004, .005, .006 & .007. RATING: 136 KVA, 440 VAC, 50 HZ, 3PHASE RATING: 100 KVA, 480 VAC, 50 HZ, 3PHASE RATING: 110VAC, 50HZ, 1PHASE E. FOR MISCELLANEOUS PIPING TYPICAL VALVING, DRAINAGE & GENERAL ARRANGEMENT OF LEVEL INSTRUMENTS PRIMARY CURRENT : 179AAC PRIMARY CURRENT : 138AAC PUMPS, STRAINERS & CONTROL VALVES SEE DRAWINGS 50489-530-020-PID-1108.001 TO 1108.010. SECONDARY CURRENT : 164AAC SECONDARY VOLTAGE: 34 KV DC PEAK. F. Drawing numbers shown in P&ID continuation boxes are abbreviated showing drawing sequential SECONDARY VOLTAGE : 480VAC 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 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-PHL-1009. L. FOR ALARM VALUES REFER DOC. NO. 50489-530-020-SUM-1006. NOTES: 1,2,3. DELETED CONTRACTOR 4. EACH DUAL FREQUENCY DESALTER IS PROVIDED WITH LCS (LOCAL CONTROL STATION) IN THE FIELD FOR FOLLOWING: A. LRC BOARD 'ON' (INDICATION) VENDOR B. CHOPPER ENABLE (INDICATION) C. 440V AC POWER 'ON' (INDICATION) D. EMERGENCY PUSH BUTTON. UL 1243H 5. TSV MOUNTED ON THE POWER UNIT IS PIPED TO AN OPEN DRAIN. FROM LSLL-1244 ALARM CONTACT OUTPUT 6. THERE ARE THREE INTERNAL LIQUID LEVEL SWITCHES IN POWER UNIT (ONE IN EACH TANK) LRC POWER DCS SYSTEM PANEL POWER WHICH ARE WIRED IN SERIES TO A COMMON TERMINAL IN THE JUNCTION BOX. LCD SCREEN 120V AC 12V DC \_\_\_\_\_REMOTE ESD S/D STATUS\_\_\_\_\_ CLIENT 7. VENDOR REFERENCE DOCUMENT/DRAWING IS AS FOLLOWS. DCS SYSTEM DESALTER P&ID-(50489-530-020-07226-PID-V004). POWER UNIT DATA SHEET-(50489-530-070-07226-DAT-V001). UL 1243K CUSTOMER ESD SIGNAL AUTO TRANSFORMER DATA SHEET-(50489-530-070-07226-DAT-V002). ESD SYSTEM INSTRUMENT CABLE BLOCK DIAGRAM—(50489—530—080—07226—BLD—V001). CAUSE & EFFECT DIAGRAM-(50489-530-020-07226-CAE-V001). LIMITS CLEAR CHÓPPER ENÀBLE POWER UNIT HIGH VOLTAGE HIGH VOLTAGE DELETED CLIENT 9. TYPE OF FLUID IN TRANSFORMER: CROSS 206 MINERAL OIL (NON-PCB). DCS SYSTEM 10. LIST OF ABRREVIATION UPS SUPPLY MODBUS RS 485 **SWITCHGEAR** 110 V AC,50 HZ DF: DUAL FREQUENCY COMMUNICATION TO DCS 1 PH,2 WIRE (MCC) HT: HIGH TENSION <u>CP-1243</u> (LOCATED IN CP : DF LRC II PANEL SUBSTATION) BUILDING) LCS: LOCAL CONTROL SWITCH LRC: LOAD RESPONSIVE CONTROLLER TR: DF AUTO TRANSFORMER PCB: POLYCHLORINATED & BI-PHENYL PU: POWER UNIT SET @ 1" BELOW [7 SET @ 90°C TSHH FROM NORMAL (194°F) 1243 OIL LEVEL **AS-BUILT** NOTE 6 SAFE AREA SUBSTATION SAFE AREA HAZARDOUS AREA KOC APPROVAL ZONE 2 NAME / KOC No: DESIGNATION GROUP / TEAM : -----**SIGNATURE AS-BUILT** LARSEN & TOUBRO LIMITED VAIBHAV VERMA DESIGNATION: AGM SIGNATURE: 01-Sep-2018 DEPT/ DIVISON: ENGINEERING 1243 SET @ 0.138 barg (15V) (2.0 PSIG) 480V AC 50Hz 3PHASE 1/2" X 1/2" SET @ 0.138 barg <u>LCS-1243</u> CHOPPER ENABLE 1/2" X 3/4" 1/2" X 3/4" SET @ 0.482 barg TSV (7 PSIG) TP 3109 SÉT @ 0.482 barg ZO ISSUED FOR AS-BUILT AKG | SRA | DER | 01.09.18 (7 PSIG) 01 ISSUED FOR CONSTRUCTION AKG | SRA | DER | 27.12.16 440V AC POWER 'ON' EMERGENCY PUSH BUTTON AKG SRA RAK 09.06.16 PAK/PRS 0 ISSUED FOR CONSTRUCTION AKG SRA RAK 14.12.16 B ISSUED INCORPORATED CLIENT COMMENTS PAK/ABY DF POWER UNIT AKG SRA RAK 09.09.15 JSI/VSA A ISSUED FOR APPROVAL NOTE 4 <u>PU-1243</u> DRAWN CHECKED HOD PEM DATE APPRD. DESCRIPTION LG 1244A CONTRACTOR REVISION (1241B DUAL FREQUENCY AUTO TRANSFORMER DESALTER VESSEL <u>TR-1243</u> (C-103)K. S. C. (1243A) 1243B 1243C HT CABLE TO GRID HT CABLE TO GRID CONTRACTOR DETAILS:-LARSEN & TOUBRO LIMITED FARIDABAD NEW GATHERING CENTRE GC-30 IN NORTH KUWAIT DOCUMENT TITLE:-PIPING & INSTRUMENTATION DIAGRAM 2"-D0-1206-C15B SECOND STAGE DESALTER POWER UNIT TRAIN-A (530-C-103) DRAWING NO. REV. KOC DRG. NO. CONTRACTOR DRG. NO. 50489-530-020-PID-1136.003 SHEET NO. 3 OF 4 SHEET NO. EF1902 COMPANY DRG. NO. PORTABLE DRUM SHEET NO.