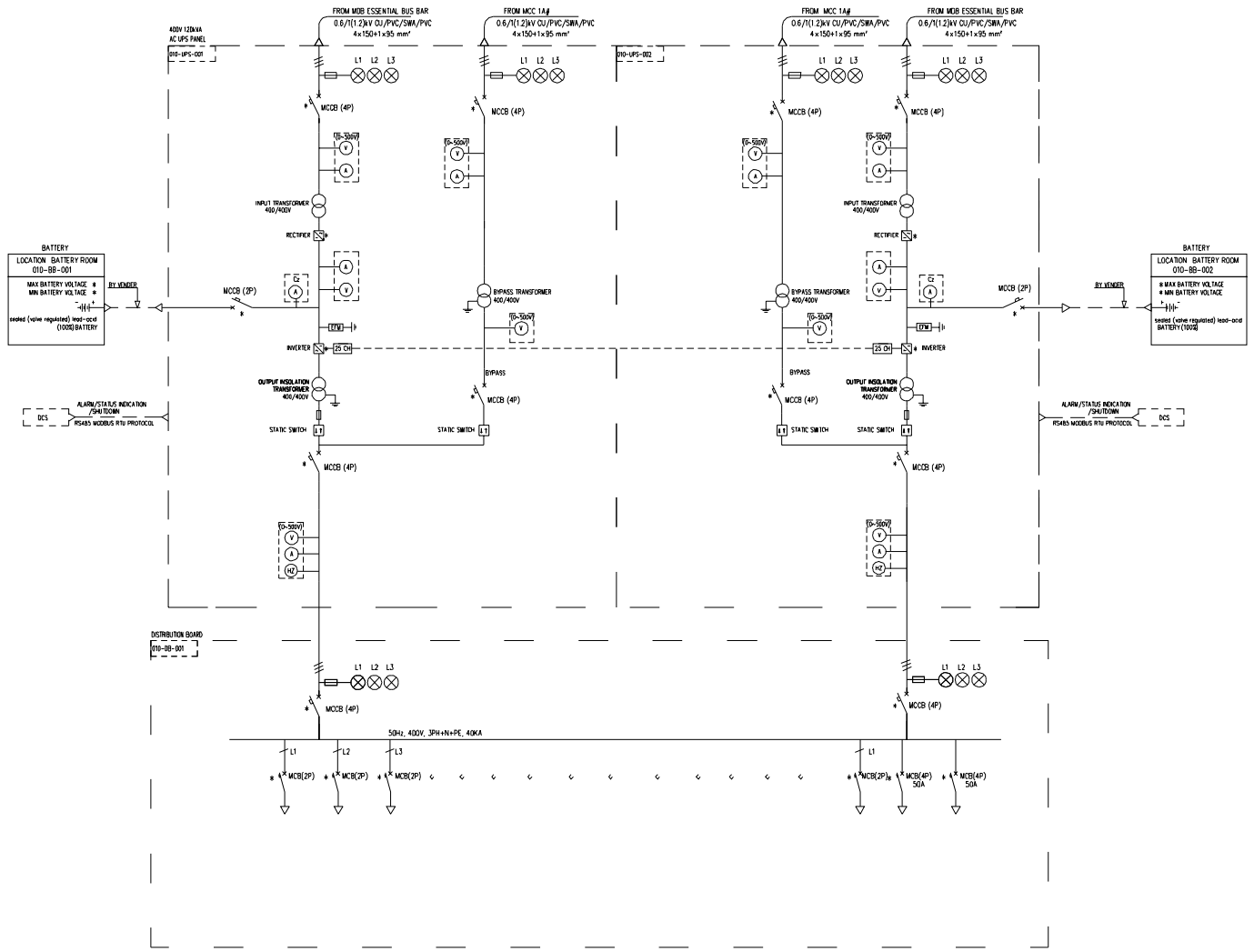


0.4kV UPS LOAD FEEDER (1)

| ZEL Tag | FEEDER ITEM NO | CAPACITY(kW) | Voltage(V) | ZEL Tag | FEEDER ITEM NO | CAPACITY(kW) | Voltage(V) |
|---|---|---|---|---|---|---|---|
| K-2201A | Condensate Stabilizer Overhead Compressor UCP Cabinet 1# | 1 | 230 | | MDB Control Power 1# | 0.7 | 230 |
| K-2201A | Condensate Stabilizer Overhead Compressor Engine Oil Pump Motor | 1 | 230 | | MCC1A# Control Power | 4.2 | 230 |
| | Turbo Expander Units Field PLC 1# | 0.8 | 230 | | MCC1B# Control Power | 3.8 | 230 |
| | Propane Refrigeration Units Field PLC-A 1# | 5 | 230 | | CommunicationRoom PABX Cabinet Power | 2 | 230 |
| | Propane Refrigeration Units Field PLC-B 1# | 5 | 230 | | 010-DB-002 | 42 | 400 |
| K-2501A | Sale Gas Compressor UCP Cabinet 1# | 1 | 230 | K-2001 | Front End Compressor Package Control Panel | 2 | 230 |
| K-2501A | Sale Gas Compressor Engine Cabinet Power | 1 | 230 | K-2002 | Front End Compressor Package Control Panel | 2 | 230 |
| K-2501B | Sale Gas Compressor UCP Cabinet 1# | 1 | 230 | - | Engineering / Operating Workstation-I | 0.6 | 230 |
| K-2501B | Sale Gas Compressor Engine Cabinet Power | 1 | 230 | K-3401C | Instrument Air Compressor Control Panel | 1.5 | 230 |
| K-2501C | Sale Gas Compressor UCP Cabinet 1# | 1 | 230 | | spare | | 230 |
| K-2501C | Sale Gas Compressor Engine Cabinet Power | 1 | 230 | | spare | | 230 |
| | Inert Gas Generation Package PLC 1# | 1.5 | 230 | | spare | | 230 |
| PLC-3101-A | Hot oil heater PLC 1# | 3 | 230 | | spare | | 230 |
| PLC-3101-B | Hot oil heater PLC 1# | 3 | 230 | | spare | | 230 |
| PLC-3101-C | Hot oil heater PLC 1# | 3 | 230 | | spare | | 230 |
| H-3401 | Instrument Air Compressors PLC 1# | 1.5 | 230 | | spare | | 400 |
| | spare | | 230 | | spare(50A) | | 400 |

0.4kV UPS LOAD FEEDER (2)

| ZEL Tag | FEEDER ITEM NO | CAPACITY(kW) | Voltage(V) | ZEL Tag | FEEDER ITEM NO | CAPACITY(kW) | Voltage(V) |
|---|---|---|---|---|---|---|---|
| K-2201A | Condensate Stabilizer Overhead Compressor UCP Cabinet 2# | 1 | 230 | | MDB Control Power 2# | 0.7 | 230 |
| K-2201A | Condensate Stabilizer Overhead Compressor Engine Oil Pump Motor | 0.75 | 230 | | MCC3# Control Power | 1.0 | 230 |
| | Turbo Expander Units Field PLC 2# | 0.8 | 230 | | MCC2# Control Power | 1.2 | 230 |
| | Propane Refrigeration Units Field PLC-A 2# | 5 | 230 | | Relay Cabinet | 0.2 | 230 |
| | Propane Refrigeration Units Field PLC-B 2# | 5 | 230 | | 010-DB-002 | 42 | 400 |
| K-2501A | Sale Gas Compressor UCP Cabinet 2# | 1 | 230 | K-2003 | Front End Compressor Package Control Panel | 2 | 230 |
| K-2501B | Sale Gas Compressor UCP Cabinet 2# | 1 | 230 | K-2004 | Front End Compressor Package Control Panel | 2 | 230 |
| K-2501C | Sale Gas Compressor UCP Cabinet 2# | 1 | 230 | - | Engineering / Operating Workstation-II | 0.6 | 230 |
| | Inert Gas Generation Package PLC 2# | 1.5 | 230 | F-3411 | Air Dryer Control Panel | 0.4 | 230 |
| PLC-3101-A | Hot oil heater PLC 2# | 3 | 230 | | spare | | 230 |
| PLC-3101-B | Hot oil heater PLC 2# | 3 | 230 | | spare | | 230 |
| PLC-3101-C | Hot oil heater PLC 2# | 3 | 230 | | spare | | 230 |
| H-3401A | Instrument Air Compressors PLC 2# | 1.5 | 230 | | spare | | 230 |
| | spare | | 230 | | spare | | 230 |
| | spare | | 230 | | spare | | 230 |
| | spare | | | | spare | | 400 |
| | spare | | 230 | | spare(50A) | | 400 |

## GENERAL NOTES

1. THIS IS TYPICAL SINGLE LINE DIAGRAM FOR AC UPS SYSTEM SCHEMATIC DRAWING'S INDICATING METERING /MIMIC & POWER DEVICE DETAILS SHALL BE COVERED IN UPS VENDER DRAWING.
2. ALL METERING SHALL BE PART OF INTERNAL ELECTRONICS AND MEASUREMENT SHALL BE DISPLAYED ON FRONT LCD SCREEN OF PANEL.
3. THE LOAD BREAK MAINTENANCE BYPASS SWITCH SHALL BE MAKE BEFORE BREAK TYPE.
4. SEPARATE BYPASS CUBICLE SHALL BE PROVIDED WITH SEPARATE DOOR FOR EASY MAINTENANCE ON UPS ITEMS.
5. IT SHALL BE POSSIBLE TO MEASURE +VE CHARGING CURRENT AND -VE DISCHARGING CURRENT OF THE BATTERY. THIS CURRENT SHALL BE DISPLAYED ON FRONT LCD SCREEN OF THE PANEL.
6. SWITCHGEAR AND COMPONENTS RATING SHALL BE SELECTED AND CONFIRMED BY VENDER.
7. THE SENSITIVITY OF EFM SHALL BE 30~300MA.
8. COMMON ALARM IN AC UPS DISTRIBUTION BOARD SHALL BE PROVIDED BY WIRING ALL TRIP CONTACTS OF OUTGOING MCCBS OF IN SERIES.
9. BATTERY CABLE SIZING SHALL BE BASED ON 1% VOLTAGE DROP (FROM UPS TO BATTERY).
10. ALL INCOMING AND OUTCOMING BREAKER SHALL COMPLY CLASS "C" TYPE CHARACTERISTICS.
11. ANTI-CONDENSATION HEATERS SHALL BE PROVIDED IN EACH PANEL WITH LOCAL INDICATION AND PREFERABLY TEST CIRCUIT.
12. VENDOR TO INDICATE THE RATING DATE WHERE THERE IS "*"
13. EACH EQUIPMENT OF THE DOUBLE CIRCUIT SUPPLIES WHICH FROM THE SAME PHASE.
14. EPC CONTRACTOR SHALL UTILIZE THE AVAILABE SPARE BREAKER FOR MARKED FEEDER CIRCUITS.
15. ANY MODIFICATION (IF REQUIRED) DURING INSTALLATION SHALL DEEM TO BE COVERED IN EPC CONTRACTOR SOW.
16. All CABLING FROM UPS DISTRIBUTION BOARD TO SPECIFIED EQUIPMENT EITHER IN CONTROL ROOM OR AT FIELD SHALL BE COVERED IN EPC CONTRACTOR SOW.

## HOLD

1. AFTER GETTING THE DATA FROM THE EQUIPMENT VENDOR, THE SINGLE LINE DIAGRAM WILL BE FINALLY CONFIRM.

## REFERENCE DOCUMENTS

| TITLE | DOC No |
|---|---|
| Electrical Design Basis | NGP-000-ELE-15.05-0001-00 |
| Specification for Un-Interruptible Power Supply System (Ac-Ups) | NGP-000-ELE-15.03-0004-13 |
| Data Sheet for Un-Interruptible Power Supply System (Ac-Ups) | NGP-000-ELE-15.17-0004-13 |
| Electric Load List | NGP-000-ELE-15.02-0001-00 |
| Electrical Load List | 093-ELA-650-3 (A) |

MODIFIED UNDER NASHPA COMPRESSION PROJECT (PHASE-II) # 14-0193

RE-ISSUED FOR TENDER

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | RE-ISSUED FOR TENDER (Modified Under NASHPA Compression Project Phase-II) | MAA | JAB | AIB | MAS | 02/04/2018 |
| 1 | ISSUED FOR TENDER (Modified Under NASHPA Compression Project Phase-II) | MAA | JAB | AIB | MAS | 09/03/2018 |
| 0A | Issued for Review & Approval (Modified Under NASHPA Compression Project Phase-II) | MAA | JAB | AIB | AHB | 29/12/2017 |
| 00 | Approval for Design | XU Tao | Liang Xinlan | Zhang xuyi | Cheng Xn | 07/11/2016 |
| C1 | Issued for Approval | XU Tao | Liang Xinlan | Zhang xuyi | Cheng Xn | 25/05/2016 |
| C | Issued for Approval | XU Tao | Liang Xinlan | Zhang xuyi | Cheng Xn | 03/05/2016 |
| B | Issued for Review | XU Tao | Liang Xinlan | Zhang xuyi | Cheng Xn | 01/04/2016 |
| A | Internal Discipline Check | XU Tao | Liang Xinlan | Zhang xuyi | Cheng Xn | 15/01/2016 |
| REV | DESCRIPTION | PRPD | CHKD | REVD | APPD | DATE |

CLIENT: OIL&GAS DEVELOPMENT COMPANY LTD.
OGDCL HOUSE, JINNAH AVENUE, BLUE AREA, ISLAMABAD PAKISTAN
TEL: +92 51 2600000, FAX: +92 51 2600026

CONSULTANT: ENAR PETROTECH SERVICES (PRIVATE) LIMITED
Plot No. 7-B, Sector-7A Korangi Industrial Area
Email: cbd@enar.com.pk Website: enar.pk
ENAR PROJECT NO. 14-0193

CONSULTANT: Zishan Engineers (Pvt.) Ltd.
An ISO 9001:2008 certified company
Office: Block 6, PECHS, Karachi-Pakistan
Tel: 092-021-34389245-46, 34387491-94, Fax: 092-021-34389492 & 34381958
E-Mail: zishan@zishan.com.pk, info@zishan.com Website: www.zishan.com

CONTRACTOR: HONG KONG HUIHUA GLOBAL TECHNOLOGY LIMITED

PROJECT NO. NASHPA 1247

PROJECT TITLE: NASHPA GAS PROCESSING AND LPG RECOVERY PLANT PROJECT-CBTNASHPA/PROJ-12/12/2016

DRAWING NO. NGP-010-ELE-15.01-0004-13

DRAWING TITLE: Single Line Diagram for UPS

| REV. | SCALE | SHEET |
|---|---|---|
| 2 | ~ | 1 OF 1 |

Drawing Size: ISO A0 (V)