

## **APPENDIX – A ERECTION CHECK LIST**

## TRANSFORMER ERECTION CHECK LIST

This checklist is intended for use at site by Site Engineers. It outlines the minimum on site checks expected to be carried out during the erection activity.

**CUSTOMER** : ..... **EQUIPMENT DETAILS** : ..... SITE

: .....

| SR. |  | STATUS |          |         |  |
|-----|--|--------|----------|---------|--|
| NO. | CHECK POINT                                    | О.К.   | NOT O.K. | REMARKS |  |
| 1   | AVAILABILITY OF DOCUMENTATION                  |        |          |         |  |
|     | Erection drawings including OGA                |        |          |         |  |
|     | Erection / Maintenance Manual                  |        |          |         |  |
|     | Transport packing list                         |        |          |         |  |
| 2   | RECEIPT OF TRANSFORMER                         |        | 1        |         |  |
|     | Externally inspected damage (if any)           |        |          |         |  |
|     | Gas pressure on receipt (Where applicable)     |        |          |         |  |
|     | Oil level (in case of oil filled transformer)  |        |          |         |  |
|     | Unit correctly positioned                      |        |          |         |  |
| 3   | RECEIPT OF ACCESSORIES                         |        |          |         |  |
|     | All materials stored correctly                 |        |          |         |  |
|     | Packing Cases inspected, damage if any         |        |          |         |  |
|     | Marshalling box inspected, damage if any       |        |          |         |  |
|     | Control panels (RTCC)inspected damage if any   |        |          |         |  |
|     | Materials received corresponded to Advise note |        |          |         |  |
|     | Any shortages / wrong supply                   |        |          |         |  |
|     | Materials comply with shipping specification   |        |          |         |  |
|     | Remark (if any)                                |        |          |         |  |



| SR. |   | S    | TATUS    |         |
|-----|---|------|----------|---------|
| NO. | CHECK POINT                                       | О.К. | NOT O.K. | REMARKS |
| 4   | ERECTION  | 1    |          |         |
|     | Transport rollers mounted                         |      |          |         |
|     | Conservator mounted                               |      |          |         |
|     | Buchholz relay and oil surge relay mounted (arrow |      |          |         |
|     | marked should be towards conservator)             |      |          |         |
|     | Breather mounted and duly charged                 |      |          |         |
|     | HV Bushings mounted                               |      |          |         |
|     | LV Bushing mounted                                |      |          |         |
|     | Tertiary Bushing mounted (if applicable)          |      |          |         |
|     | HV neutral Bushing mounted                        |      |          |         |
|     | LV Neutral Bushing mounted                        |      |          |         |
|     | Bushing installed at correct angles               |      |          |         |
|     | Diaphragm checked                                 |      |          |         |
|     | MOLG mounted                                      |      |          |         |
|     | Radiator mounted                                  |      |          |         |
|     | Fans mounted                                      |      |          |         |
|     | Pressure Relief valves mounted                    |      |          |         |
|     | Alignment of all pipe work                        |      |          |         |
|     | OLTC Conservator mounted                          |      |          |         |
|     | Heat Exchangers assembled with pipe work          |      |          |         |
|     | Topping up of transformer oil                     |      |          |         |
|     | Leakage observed after 24 hrs.(if any)            |      |          |         |
|     | Rating Diagram and identification plate fitted    |      |          |         |
|     | Control panel (RTCC) aligned                      |      |          |         |
|     | Control panel (OLTC) aligned                      |      |          |         |
|     |   |      |          |         |
|     |   |      |          |         |



| SR. |   | S    |          |         |  |
|-----|---|------|----------|---------|--|
| NO. | CHECK POINT                                     | О.К. | NOT O.K. | REMARKS |  |
| 5   | OIL FILLING                                     |      |          |         |  |
|     | All bushing oil level                           |      |          |         |  |
|     | Tap changer selector oil level                  |      |          |         |  |
|     | Diverter switch oil level                       |      |          |         |  |
|     | Auxiliary unit oil level                        |      |          |         |  |
|     | Radiator, Headers oil filled                    |      |          |         |  |
|     | Transformer / OLTC Conservator oil tight        |      |          |         |  |
|     | Complete transformer oil tight                  |      |          |         |  |
|     | All air release plug vented                     |      |          |         |  |
|     | Valves in service position                      |      |          |         |  |
|     | All drain / filter valves blanked               |      |          |         |  |
| 6   | MULTICORE CABLE                                 |      |          |         |  |
|     | All tray work adequately secured                |      |          |         |  |
|     | All cables adequately tied/clipped back to tray |      |          |         |  |
|     | Cables glaned correctly                         |      |          |         |  |
| 7   | BREATHERS                                       |      |          |         |  |
|     | Transformer silica gel breather satisfactory    |      |          |         |  |
|     | Tap changer silica gel breather satisfactory    |      |          |         |  |
|     | Dry breather correctly installed                |      |          |         |  |
| 8   | FANS  |      |          |         |  |
|     | Fans rotate freely & quickly                    |      |          |         |  |
|     | Pumps installed for correct flow                |      |          |         |  |
|     | Flow indication visible                         |      |          |         |  |
| 9   | CONTROL PANELS                                  |      |          |         |  |
|     | Cable termination & Glanning                    |      |          |         |  |
| 10  | Cleaning and touch up of painting               |      |          |         |  |
|     |   |      |          |         |  |



## **APPENDIX - B PRE-COMMISSIONING CHECKS**

| Customer:          |                | Site:         |
|--------------------|----------------|---------------|
| TRANSFORMER        | Rating:        | Oil Qty:      |
| DETAILS:           | Voltage:       | Mass of oil:  |
|                    | Year of Manf.: | Wight of C&W: |
|                    | Sr. No.:       | Impedance:    |
|                    | Vector Group:  | TR Tag #:     |
|                    |                |               |
| OLTC/OCTC DETAILS: | Make:          | YOM:          |
|                    | Туре:          | Sr. No.:      |
|                    | Tap Position:  |               |

## **GENERAL CHECKS:**

| SR. |   | STATUS |          |         |
|-----|---|--------|----------|---------|
| NO. | CHECK POINTS  | О.К.   | NOT O.K. | REMARKS |
| 1   | Direction & mounting angle of O.S.R. & Buchholz relay         |        |          |         |
| 2   | Dryness of silica gel, seal removal & oil level in bottom cup |        |          |         |
| 3   | Oil level in Main conservator.                                |        |          |         |
| 4   | Oil level in OLTC conservator.                                |        |          |         |
| 5   | Oil filled in OTI / WTI pockets.                              |        |          |         |
| 6   | Earthing of Main tank, cooler bank, neutral, fans, pumps, etc |        |          |         |
| 7   | Absence of oil seepages / leakages.                           |        |          |         |
| 8   | Bushing -their oil levels & test cap covering.                |        |          |         |
| 9   | Explosion vent & rupture pin setting.                         |        |          |         |
| 10  | Touch up painting & washing.                                  |        |          |         |
| 11  | Overall clearances.   |        |          |         |
| 12  | Atmoseal commissioned (top gauge glass to show full oil )     |        |          |         |
| 13  | Sagging of radiator / pipes                                   |        |          |         |
| 14  | Tightness of bushing top seal                                 |        |          |         |
| 15  | Distortion in expansion bellows / removal of transit support  |        |          |         |



| A. MARSHALLING BOX (Sl. No. & Rating:) |                                       |      |          |         |
|--|---------------------------------------|------|----------|---------|
| SR.                                    |                                       | S    | TATUS    |         |
| NO.                                    | CHECK POINTS                          | О.К. | NOT O.K. | REMARKS |
| 1                                      | W.T.I. (Sl. No., Make & Model)        |      |          |         |
|  | a. Transit lock release.              |      |          |         |
|  | b. Switch settings & operation.       |      |          |         |
|  | c. Connections.                       |      |          |         |
|  | d. Ambient reading.                   |      |          |         |
|  | e. Heater shunt shorting link.        |      |          |         |
|  | f. Matching with repeaters.           |      |          |         |
|  | g. Power supply & current converter   |      |          |         |
| 2                                      | O.T.I (Sl. No., Make & Model)         |      |          |         |
|  | a. Transit lock release               |      |          |         |
|  | b. Switch setting & operation.        |      |          |         |
|  | c. Connections.                       |      |          |         |
|  | d. Ambient reading.                   |      |          |         |
|  | e. Matching with repeaters.           |      |          |         |
| 3                                      | Space heater & Thermostat settings.   |      |          |         |
| 4                                      | Cabling, Glanding, Termination etc.   |      |          |         |
| 5                                      | Earthing & Touch up painting.         |      |          |         |
| 6                                      | Stand by supply change over operation |      |          |         |
| 7                                      | Timer settings.                       |      |          |         |
| 8                                      | Closure of openings & tidiness.       |      |          |         |