

# ANNEXURE A

## SCOPE OF WORK AND PRICING SCHEDULE

### 1. REPAIRS AND REPLACEMENT.

Repairs/Replacement and Full Service (Once-Off)

| #   | DESCRIPTION                        | unit             | QTY | PRICE | TOTAL |
|---|------------------------------------|------------------|-----|-------|-------|
| <b>Plant 1 has 2 compressors x 60HP Copland</b> |                                    |                  |     |       |       |
| 1   | Replace core driers                | 2 per compressor | 4   |       |       |
| 2   | Replace conductors                 | 1per compressor  | 2   |       |       |
| 3   | Replace overload                   |                  | 2   |       |       |
| 4   | Replace high / low pressure switch |                  | 2   |       |       |
| 5   | Flush system with Nitrogen         |                  |     |       |       |
| 6   | Charge the system with R22 gas     |                  |     |       |       |
| 7   | Electrical wiring on the system    |                  |     |       |       |
| 8   | replace water pump motor 3kw       |                  | 1   |       |       |
| 9   | Check Temperature control switch   |                  | 2   |       |       |
| 10  | <b>Commission the system</b>       |                  |     |       |       |
| <b>Plant2 also has 2 compressors x 60HP</b>     |                                    |                  |     |       |       |
| 1   | Replace core driers                | 2 per compressor | 4   |       |       |
| 2.  | Replace conductors                 | 1 per compressor | 2   |       |       |
| 3.  | Replace over load                  |                  | 2   |       |       |
| 4.  | Replace high/low pressure switch   |                  | 2   |       |       |
| 5.  | Check temperature control switch   |                  | 2   |       |       |
| 7.  | Flush system with nitrogen         |                  |     |       |       |
| 8   | Charge the system with R22 gas     |                  |     |       |       |
| 9   | Electrical wiring on the system    |                  |     |       |       |
| 8.  | <b>Commission the system</b>       |                  |     |       |       |
| <b>SUB-TOTAL</b>                                |                                    | <b>R</b>         |     |       |       |

**SERVICE OF CHILLER PLANT AS PER BELOW SHEET FOR THE PERIOD 36 MONTHS**

**LEGEND:**

**M = MONTHLY**

**Q = QUARTERLY**

**BI = BI-MONTHLY**

**A – ANNUALLY**

| <b>NO</b> | <b>DESCRIPTION</b>   | <b>FREQUENCY</b> | <b>Price/Rate</b> |
|-----------|--|------------------|-------------------|
| 1.        | Clean air filters  | M                |                   |
| 2.        | Remove panel & clean unit internally                               | M                |                   |
| 3.        | Check filter frames for air by-pass and rectify                    | M                |                   |
| 4.        | Check and clean condensate drip tray and drain                     | M                |                   |
| 5.        | Check cooling operation  | M                |                   |
| 6.        | Check heating operation  | Q                |                   |
| 7.        | Check and record temperatures                                      | Q                |                   |
| 8.        | Check operations of fans   | M                |                   |
| 9.        | Check and report on abnormal noise                                 | M                |                   |
| 10.       | Check V-belts for tension and alignment and replace if necessary   | M                |                   |
| 11.       | Clean electrical panels & switch gear                              | M                |                   |
| 12.       | Check timer  | M                |                   |
| 13.       | Test controls & safeties   | M                |                   |
| 14.       | Check compressor oil level (if applicable)                         | M                |                   |
| 15.       | Record high & low refrigerant pressures                            | Q                |                   |
| 16.       | Check sight-glasses for moisture indication                        | M                |                   |
| 17.       | Check compressor unloading mechanism (if applicable)               | M                |                   |
| 18.       | Check crankcase heater   | M                |                   |
| 19.       | Ensure that updated electrical drawings are in panel               | M                |                   |
| 20.       | Bearing to be lubricated   | Q                |                   |
| 21.       | Check & record amperages   | Q                |                   |
| 22.       | Check for refrigerant  | Q                |                   |
| 23.       | Check operation of condenser fans                                  | Q                |                   |
| 24.       | Check for corrosion, de-rust and paint equipment if required       | A                |                   |
| 25.       | Check evaporator/condenser coils and chemically clean if necessary | A                |                   |

|                  |          |
|------------------|----------|
| <b>SUB-TOTAL</b> | <b>R</b> |
|------------------|----------|

### Scope of work for Ventilation / exhaust fans

| <b>No</b>        | <b>Description</b>   | <b>Frequency</b> | <b>Price/Rate</b> |
|------------------|--|------------------|-------------------|
| 1.               | Check inlet screens  | A                |                   |
| 2.               | Check fan blades and bearings                                    | A                |                   |
| 3.               | Check motor fan  | A                |                   |
| 4.               | Check flexible connections between fan and ducting               | A                |                   |
| 5.               | Check electrical flexible connection to motor for any damage     | A                |                   |
| 6.               | Check fan base motor mountings                                   | A                |                   |
| 7.               | Check for any signs of corrosion, de-rust and paint if necessary | A                |                   |
| 8.               | Record motor current   | A                |                   |
| 9.               | Check and tighten if necessary all hold down bolts               | A                |                   |
| 10.              | Clean fan blade  | A                |                   |
| 11.              | Check electrical terminal connections on motor                   | A                |                   |
| <b>SUB-TOTAL</b> |  | <b>R</b>         |                   |

### Scope of work for Water Pump service schedule

| <b>No</b>        | <b>Description</b>  | <b>Frequency</b> | <b>Price/Rate</b> |
|------------------|---|------------------|-------------------|
| 1.               | Check oil level & top p if necessary  | M                |                   |
| 2.               | Check gland packing / mechanical seal   | M                |                   |
| 3.               | Check drain piping  | M                |                   |
| 4.               | Check for abnormal noise  | M                |                   |
| 5.               | Long water pressures  | Q                |                   |
| 6.               | Check for abnormal vibration  | M                |                   |
| 7.               | Lubricate bearings  | Q                |                   |
| 8.               | Check alignment of couplings  | Q                |                   |
| 9.               | Close valves fully & then re-open   | A                |                   |
| 10.              | Record Amperages  | A                |                   |
| 11.              | Check for corrosion, de rust and paint if required  | A                |                   |
| 12.              | Check all bolts and anti-vibration mounts   | A                |                   |
| 13.              | Lubricate valve stems   | A                |                   |
| 14.              | Check gland packing/mechanical seal. If replace gland packing g and report on mechanical seal | A                |                   |
| <b>SUB-TOTAL</b> |   | <b>R</b>         |                   |

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### Scope of work for Water cooled package unit

| NO               | DESCRIPTION  | FREQUENCY | Price/Rate |
|------------------|--|-----------|------------|
| 1.               | Clean air filters  | M         |            |
| 2.               | Remove panel & clean unit internally                             | M         |            |
| 3.               | Check filter frames for air by-pass and rectify                  | M         |            |
| 4.               | Check condensate try and drain                                   | M         |            |
| 5.               | Check cooling operation  | M         |            |
| 6.               | Check operations of fan s  | M         |            |
| 7.               | Check and report on abnormal noise                               | M         |            |
| 8.               | Check V-belts for tension and alignment and replace if necessary | M         |            |
| 9.               | Clean electrical panels and switchgear                           | M         |            |
| 10.              | Check timers   | M         |            |
| 11.              | Test controls and safeties                                       | M         |            |
| 12.              | Record high and low refrigerant                                  | M         |            |
| 13.              | Check sight-glasses for moisture indication                      | M         |            |
| 14.              | Check crankcase heater   | M         |            |
| 15.              | Check that updated electrical drawings are in panel              | M         |            |
| 16.              | Check for refrigerant leaks                                      | M         |            |
| 17.              | Check for loose electrical connection                            | M         |            |
| 18.              | Check for air leaks  | M         |            |
| 19.              | Check for corrosion, de-rust and paint if required               | M         |            |
| 20.              | Chemically clean evaporator coils                                | M         |            |
| 21.              | Check general condition of unit                                  | M         |            |
| 22.              | Tighten electrical connections                                   | M         |            |
| <b>SUB-TOTAL</b> |  | <b>R</b>  |            |