**Attachment B**

 The following tasks are minimum requirements to be conducted on the equipment listed and in addition to the manufactures required maintenance tasks and intervals.

**Main Chiller Plant 750 Ton Centrifugal Chiller(s)**

**The following maintenance to be performed on chillers 1 and 2:**

**Weekly**

1. Check over all operation of unit and report deficiencies to MOS/COR
2. Inspect unit for signs of refrigerant and oil leaks.
3. Check unit for unusual vibration.
4. Check refrigerant charge
5. Check oil levels.
6. Check operating pressures.
7. Check water flow.
8. Provide checklist and report to COR.

**Monthly**

1. Check operating controls for accuracy.
2. Check purge unit operation and settings.
3. Check lubricating system(s) for proper operation.
4. Grease bearings in accordance with manufacturer’s runtime intervals.
5. Check all safeties for proper operation.
6. Provide checklist and report to COR.

**Quarterly**

1. Check evaporator and condenser water flowrates.
2. Verify correct condenser and evaporator water heat transfer.
3. Change purge unit dehydrator.
4. Provide checklist and report to COR.

**Semi Annually**

1. Conduct refrigerant leak check.
2. Conduct oil analysis (provide independent laboratory report). **Note: Test to be conducted before** **oil change**
3. Check all power and control voltages for correct operating parameters.
4. Verify correct operation of VSD.
5. Verify proper operation of Variable Speed Drives cooling circuit and perform required maintenance tasks.
6. Provide checklist and report to COR.

**Annual**

1. Conduct vibration analysis(provide report of results).
2. Brush clean condenser tubes.
3. Perform Eddy current test on condenser tubes (provide report of results).
4. Meg ohm compressors drive motor.
5. Change compressor oil and filters.
6. Check compressor lubricating system operation and perform required maintenance.
7. Pressurize unit and conduct leak test.
8. Conduct refrigerant analysis (provide independent laboratory report).
9. Check compressor seal for deficiencies (replace seal if required).
10. Check compressor drive coupling and replace if necessary.
11. Check alignment between drive motor and compressor and realign as necessary.
12. Clean motor starter contacts or replace if necessary.
13. Check inlet vane operation and make adjustments if required.
14. Check inlet vane drive motor and linkages and lubricate where required.
15. Clean control panel.
16. Check control panel electrical connections and tighten.
17. Check control panel display for accuracy and correct set points.
18. Run diagnostics test on control panel.
19. Check sensors for accuracy and recalibrate if required.
20. Repair insulation where removed for inspection or maintenance and repairs.
21. Provide checklist and report to COR.

**Main Chiller Plant 1000 Ton condenser water Cooling Tower(s)**

**The following maintenance to be performed on towers 1 and 2:**

**Weekly**

1. Check unit for proper operation.
2. Clean debris from unit.
3. Clean sump strainer.
4. Check and adjust sump water level.
5. Check unit for unusual noise and vibration.
6. Provide checklist and report to COR.

**Monthly**

1. Check fan belt tension and condition replace worn belts.
2. Check fan bearing locking collars.
3. Check for proper water flow.
4. Lubricate fan shaft bearings in accordance with manufacturers recommended intervals.
5. Lubricate fan drive motor in accordance with manufacturers recommended intervals
6. Provide checklist and report to COR.

**Semi Annual**

1. Inspect and clean spray nozzles and distribution pans replace defective parts.
2. Lubricate motor base adjusting screw.
3. Check motor voltages and amperages.
4. Meg Ohm test fan drive motor.
5. Check condition and clean spray eliminators.
6. Clean entire tower.
7. Verify proper sump heater for operation.
8. Provide checklist and report to COR.

**Main Chiller Plant Pump(s) maintenance to be performed on the following:**

* Primary pumps 1, 2 and 3
* Secondary Chilled water pumps 4, 5 and 6
* Condenser water pumps 1 and 2.

**Weekly**

1. Check for mechanical seal leaks
2. Make sure all gauges are operating and correct readings are displayed.
3. Check for unusual mechanical or hydraulic noise and vibration.
4. Provide checklist and report to COR.

**Monthly**

1. Grease bearings in accordance with manufacturer’s recommendations.

**Semi Annual**

1. Check motor to pump alignment.
2. Check condition drive coupling and replace as necessary.
3. Clean suction diffuser strainers.
4. Clean or replace motor starter contacts.
5. Tighten electrical connections.
6. Provide checklist and report to COR.

**Annual**

1. Meg Ohm test motor

**CLC Chiller Plant 90 Ton Screw Chillers**

**The following maintenance to be performed on chillers 1 and 2:**

**Weekly**

1. Check over all operation of unit (address deficiencies with MOS/COR)
2. Inspect unit for signs of refrigerant or oil leaks.
3. Check unit for unusual vibration.
4. Check refrigerant charge.
5. Check oil levels.
6. Check evaporator and condenser water flow.
7. Provide checklist and report to COR.

**Monthly**

1. Check all safeties for proper operation.
2. Check operating controls for accuracy.
3. Grease bearings in accordance with manufacturer’s runtime intervals.
4. Check lubricating system(s) for proper operation.
5. Provide checklist and report to COR.

**Quarterly**

1. Verify correct evaporator and condenser water flowrates.
2. Check condenser water and chilled water heat transfer.
3. Change purges unit dehydrator.
4. Check all electrical connections line/control on unit for imperfections and tightness.

**Semi Annually**

1. Conduct refrigerant leak check.
2. Conduct oil analysis (provide independent laboratory report).
3. Check compressor lubricating system operation and perform required maintenance.
4. Record all power and control voltages for proper operation of Variable speed drive.
5. Verify proper operation of Variable Speed Drives cooling circuit and perform required maintenance tasks.

**Annual**

1. Conduct vibration analysis(provide report).
2. Clean evaporator tubes.
3. Clean condenser tubes.
4. Perform Eddy current test on evaporator and condenser tubes (provide report).
5. Meg ohm compressor(s) drive motor.
6. Change compressor oil and filters.
7. Check compressor lubricating system operation and perform required maintenance.
8. Pressurize unit and conduct leak test.
9. Conduct refrigerant analysis (provide independent laboratory report).
10. Check and record motor voltages.
11. Check alignment and condition of motor drive coupling.
12. Check compressor seal for deficiencies.
13. Clean motor starter contacts or replace.
14. Check inlet vane operation and make adjustments if required.
15. Check inlet vane drive motor and linkages and lubricate where required.
16. Clean control panel.
17. Check control panel electrical connections and tighten.
18. Check control panel display for accuracy and correct set points.
19. Run diagnostics test on control panel.
20. Repair insulation where removed for inspection or maintenance and repairs.