Water

Circuit

Typical Schematic

Diagram of

Fresh Water

Cooling Towers

Condensing

Appendix 1A

MAKE-UP WATER TREATMENT/CONTROL FROM CITY MAIN WATER WATER METER TO RECORD MONTHLY MAKE-UP WATER CONDENSING QUANTITY CHILLERS MAKE-UP WATER TANK COOLING CHILLED FAN DRIFT ELIMINATOR WATER DISTRIBUTION SYSTEM (FOR INDIRECT-CONTACT COOLING -(M) TOWER ONLY) SLOPE WATER BASIN OVERFLOW PIPE CONNECTS TO BLEED-OFF TANK WITH A SEPARATE WARNING PIPE BEING DISCHARGED COOLING WATER SAMPLING TAP ENERGY METER TO RECORD MONTHLY ENERGY CONSUMPTION OF WATER-SIDE (MONTHLY TESTING) INTO A CONSPICUOUS POSITION EQUIPMENT OF THE AC SYSTEM FLUID INLET/OUTLET WATER METER TO RECORD MONTHLY (FOR INDIRECT-CONTACT BLEED-OFF WATER QUANTITY COOLING TOWER ONLY) AUTOMATIC BLEED-OFF BLEED-OFF PIPE PHYSICAL WATER (c) TREATMENT EQUIPMENT CONDUCTIVITY/TDS CONTROLLER* REAL TIME CONTROL AND MONITORING WATER TREATMENT SYSTEM BLEED-OFF WATER (RECOMMENDED) CLOUD—BASED MONITORING & 1. COOLING TOWER WATER CIRCULATION SYSTEM CCMS/BMS ≻ BLEED-OFF WATER RETENTION TANK PIPEWORK SHALL BE DESIGNED TO AVOID (IF APPLICABLE) SAMPLING TAP (MIN. 2HRS HOLDING DEAD-LEG AND STAGNANT CORNERS. SIMPLE (QUARTERLY TESTING) CONTROL SYSTEM CAPACITY) PIPEWORK DESIGN SHALL BE ADOPTED, IF THE EXISTENCE OF DEAD-LEG CANNOT BE SENSORS* AVOIDED, MITIGATION MEASURES FOR WATER FOR DIRECT-CONTACT DEAD-LEG SHALL BE PROVIDED, SUCH AS TREATMENT INSTALLATION OF MANUAL/AUTOMATIC DRAIN VALVE FOR WEEKLY PURGING OF 15 MINUTES. COOLING TOWER ONLY CONTROLLER 2. THE PIPEWORK OF THE SAMPLING TAP CHEMICAL SHALL NOT BE EXCESSIVELY LONG AND DOSING CCMS/BMS (IF APPLICABLE) SHALL BE POSITIONED AS CLOSE TO PUMP FLUSHING WATER THE MAIN PIPE AS POSSIBLE SO AS CONTROL FROM CITY MAIN WATER-COOLED CONDENSER/ TO AVOID THE PROBLEM OF DEAD LEG. PANEL³ 3. ISOLATING VALVES SHOULD BE INSTALLED FOR SYSTEM WITH MULTIPLE COOLING TOWERS HEAT EXCHANGER TO FLUSHING CHEMICAL WATER (REUSE FOR FLUSHING TREATMENT EQUIPMENT TO FACILITATE CLEANSING AND DISINFECTION UNITSS A SPECIAL OF INDIVIDUAL COOLING TOWER. PERMISSION FOR DIRECT DISCHARGING IS GRANTED.) CHEMICAL WATER TREATMENT SYSTEM FLUSHING WATER TANK CONDENSING WATER PUMPS / COOLING (WITH CONTROL ARRANGEMENT TO PRIORITIZING THE FLOW OF BLEED OFF WATER INTO FLUSHING WATER WATER PUMPS (FULLY AUTOMATIC CHEMICAL WATER TREATMENT SYSTEM SHALL BE ADOPTED TO (PROVISION OF RECIRCULATING PUMP CONTROL CHEMICAL CONCENTRATION ACCURATELY AND TO AVOID LARGE REMARK CONTROLLED BY A TIMER TO CIRCULATE WATER THROUGH THE SYSTEM FLUCTUATIONS IN CHEMICAL LEVELS. TANK OVER THE FLUSHING WATER SUPPLY IF THE TYPICAL DIAGRAM IS PREPARED AS A IT IS RECOMMENDED TO INTEGRATE THE WATER TREATMENT SYSTEM TO INTERNET BLEED-OFF WATER IS DIRECTLY DISCHARGED TO THE GENERAL REFERENCE ON PROPER PROVISION IN OF THINGS (IOT) WATER TREATMENT CONTROLLER WITH CLOUD-BASED WATER FLUSHING WATER TANK, ADEQUATE CAPACITY IN THE PERIODICALLY (AT LEAST ONCE A WEEK) THE COOLING TOWER SYSTEM FOR EFFECTIVE IS RECOMMENDED WHEN COOLING FLUSHING WATER TANK SHALL BE RESERVED TO TREATMENT MANAGEMENT SOFTWARE OR CENTRAL SERVER BASED CENTRAL OPERATION AND COMPLYING WITH CoP(FWCT). PREVENT OVERFLOWING. THE BLEED-OFF WATER SHALL CONTROL AND MONITORING SYSTEM (CCMS)/ BUILDING MANAGEMENT SYSTEM TOWERS ARE TEMPORARY NOT IN USE.) THIS TYPICAL SCHEMATIC DRAWING IS FOR BE PRIORITIZED TO REFILL THE FLUSHING TANK.) (BMS) OF THE BUILDING.) REFERENCE ONLY THE DESIGNERS SHOULD EXERCISE PROFESSIONAL JUDGMENT TO MODIFY * : WIRELESS CONNECTION COULD BE ADOPTED SUBJECT TO SITE CONDITIONS THE DIAGRAM AS APPROPRIATE. TYPICAL SCHEMATIC DIAGRAM OF FRESH WATER COOLING TOWERS CONDENSING WATER CIRCUIT

