Chiller Plant Standard Operating Procedure

Sample SOP for chiller plant operation and maintenance — HVAC

Site / Building: _____ **Asset Ref:** _____

1. Purpose

This SOP defines the standard steps for safe start-up, operation, shutdown and routine monitoring of the chiller plant, ensuring consistent performance and preventing unplanned downtime.

2. Scope

Applies to all technicians and FM personnel responsible for chiller plant operation at this site, covering air-cooled and water-cooled chiller configurations.

3. Safety Precautions

- Wear appropriate PPE — safety glasses, gloves, and hearing protection near running equipment.
- Confirm lock-out/tag-out (LOTO) procedures before any electrical isolation work.
- Do not operate the chiller if refrigerant leak is suspected — evacuate and ventilate the area first.
- Refer to the manufacturer O&M manual for model-specific safety interlocks.

4. Start-Up Procedure

- Confirm all isolation valves on chilled water and condenser water circuits are open.
- Verify condenser water pump (if water-cooled) is running and flow is confirmed.
- Check oil level and refrigerant sight glass before starting compressor.
- Start chiller via BMS or local panel; confirm compressor starts within expected amperage draw.
- Monitor suction/discharge pressures during the first 15 minutes of operation.

5. Routine Monitoring (During Operation)

- Record chilled water supply/return temperatures every shift.
- Record suction and discharge pressures every shift.
- Check for unusual noise, vibration, or refrigerant odour.

6. Shutdown Procedure

- Initiate shutdown via BMS or local panel — allow pump-down cycle to complete.
- Confirm compressor has stopped before isolating power, if isolation is required.
- Record final readings and log any anomalies observed.

7. Records

All readings must be logged on the chiller plant daily log sheet and retained for a minimum of 12 months for audit purposes.

Sign-off

Role	Name	Signature	Date
Prepared by			
Approved by			