|  |  |  |  |
| --- | --- | --- | --- |
| **Document Title:** | Risk Identification and Hazard Assessment | | |
| **Document CODE:** | PS-14122024 | | |
| **Date:** | 01/27/2025 | **SITE / LOCATION:** | PFIZER PAKISTAN DOLMEN |

**Risk Assessment for Water-Cooled Package Unit Maintenance**

**1. Fresh Air Handling Units (FAHUs)**

**Risk Assessment**

**Risks:**

* Electrical shock during maintenance.
* Exposure to dust and allergens.
* Falling from height if units are elevated.
* Strains from lifting heavy components.

**Control Measures:**

* Ensure proper electrical isolation.
* Wear PPE, including gloves, masks, and goggles.
* Use ladders/scaffolding with proper fall protection.
* Use lifting aids or team lifting for heavy parts.

**Method Statement**

1. Turn off power and isolate the FAHU.
2. Inspect and clean filters, coils, and blower assembly.
3. Replace filters and lubricate moving parts as needed.
4. Test the unit for proper airflow and operation.

**2. Ducted Fan Coil Units**

**Risk Assessment**

**Risks:**

* Electrical hazards.
* Injuries from sharp edges on ducts.
* Slip hazards from water during coil cleaning.

**Control Measures:**

* Ensure power isolation and display warning signs.
* Wear cut-resistant gloves.
* Place absorbent mats or barriers to contain water spillage.

**Method Statement**

1. Deactivate the unit and disconnect electrical power.
2. Open access panels and clean filters and coils.
3. Check and clear condensate drain lines.
4. Inspect motor and fan for wear and tear.

**3. Water Cooled Package Units**

**Risk Assessment**

**Risks:**

* Handling refrigerants and chemical exposure.
* Heat stress in confined spaces.
* Electrical and mechanical hazards.

**Control Measures:**

* Ensure safe handling and disposal of refrigerants.
* Use appropriate PPE, including face shields and gloves.
* Provide adequate ventilation in the workspace.

**Method Statement**

1. Isolate power supply and tag it.
2. Inspect refrigerant levels and cooling system integrity.
3. Clean condenser coils and water strainers.
4. Test the compressor, electrical connections, and controls.
5. Restore power and conduct performance testing.

**4. Variable Air Volume (VAV) Systems**

**Risk Assessment**

**Risks:**

* Electrical and control wiring issues.
* Falling hazards during ceiling access.
* Dust inhalation during damper adjustment.

**Control Measures:**

* Ensure isolation of power circuits before maintenance.
* Use secure ladders or platforms for ceiling access.
* Wear appropriate respiratory protection.

**Method Statement**

1. De-energize the system and confirm safe access.
2. Inspect dampers, actuators, and airflow settings.
3. Clean internal components and replace faulty parts.
4. Test airflow modulation and recalibrate controls.

**5. Constant Air Volume (CAV) Systems**

**Risk Assessment**

**Risks:**

* Manual handling injuries.
* Inaccurate airflow readings causing inefficiencies.
* Electrical risks during control checks.

**Control Measures:**

* Use proper lifting techniques or equipment.
* Test airflow with calibrated tools.
* Wear insulated gloves for electrical work.

**Method Statement**

1. Turn off power and isolate the system.
2. Inspect and clean the damper and ductwork.
3. Verify airflow and control settings.
4. Reconnect power and test for constant operation.

**6. Exhaust Toilet**

**Risk Assessment**

**Risks:**

* Odor and exposure to contaminants.
* Electrical risks during fan inspection.
* Confined space hazards.

**Control Measures:**

* Use appropriate ventilation and masks.
* Follow lockout/tagout procedures.
* Ensure proper lighting and entry protocols.

**Method Statement**

1. Deactivate the fan and lock out the electrical supply.
2. Inspect and clean the fan blades, motor, and housing.
3. Replace worn components and ensure secure mounting.
4. Re-energize and test the exhaust operation.

**7. HVAC Deep Cleaning and Disinfection**

**Risk Assessment**

**Risks:**

* Chemical exposure from disinfectants.
* Slips and trips on wet surfaces.
* Inhalation of dislodged dust or mold spores.

**Control Measures:**

* Use approved cleaning agents and PPE (masks, gloves).
* Place "Wet Floor" signs and maintain cleanliness of work area.
* Use HEPA-filtered vacuums to remove contaminants.

**Method Statement**

1. Isolate the system and prepare cleaning equipment.
2. Vacuum ducts, coils, and internal components.
3. Apply disinfectant using an approved fogger or sprayer.
4. Test airflow and inspect for cleanliness before restoring the system.