



METHOD STATEMENT

AC DUCT CLEANING

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SCOPE:

This method statement covers the procedures to AC Duct Cleaning.

OBJECTIVE

This Method Statement is for guidance of the staff / Technicians who will be involved in carrying out the AC Duct Cleaning.

- This method statement is to ensure the work will be executed in an efficient and safe manner.

TOOLS & EQUIPMENTS REQUIRED:

Rotating Brush, HEPA Vacuum, Air Compressor, High Pressure Jetting Machine, Low Pressure Spray, Cleaning Brushes, Vipers, Brush, buckets, spanners, cleaning materials, Plastic covers.

SAFETY:

- All safety measures and precautions shall be maintained.
- PPE such as gloves, safety shoe, mask, goggles and uniform.

MATERIALS

Oxine, safety goggles, hand gloves, safety shoes, mask.



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PRIOR ACTIVITIES:

- PTW – Permit to work to be obtained
- Briefing the activity to all technicians by supervisor through tool box talk.

RESPONSIBILITIES:

- Site Supervisor shall ensure that all tools and equipment are made available sufficiently in advance to the commencement of the work.

PROCEDURE:

STEP 1: CLEANING & DISINFECTION

HVAC DUCT

- Pre inspect to determine exact location and type of A/C equipment, and if any access points are required.
- Check if the AC system is working and there is no abnormal noise before starting. If there is a problem report it to the customer or tenant and operations before starting the cleaning.
- Isolate/Switch off the A/C system, AHU and isolate a section of ducting for cleaning.
- Often the system can be accessed through existing openings, such as vents, grills and ductwork end caps. Use ladder and scaffolding as necessary.
- Additional access openings are often required at various points throughout the HVAC system to facilitate the cleanings. Take necessary approvals before cutting the access openings.
- Click before cleaning pictures using a camera for evidence and service reports pictures.
- Place clean protective coverings (plastic covers) on furnishings or equipment.
- Create a negative pressure by using our potable specialized vacuum equipment with HEPA filtration.
- Remove grills/vents and plug openings using a ladder except for the one furthest away from the vacuum unit.
- From the vent/grill furthest away, insert the selected cleaning tool to loosen the dust dirt and debris, which shall be pulled while working toward the vacuum containment equipment.
- The cleaning technician will use any of the several types of hard or soft bristle brushes to physically agitate the debris adhered to a surface within the HVAC system.
- The cleaner will also employ a wide variety of brush types depending on the type of duct to be cleaned and the type of contaminants present.
- Use a pre mixed disinfectant solution or mix the chemical outside the building premises.
- When sections of supply or return air ducts have been completed, sanitizing shall be carried out using a sanitizer applied by spraying.



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- Clean and sanitize the grills, coil and drip tray using a pressure washer and disinfectant. This must be done in the wash area or bathroom.
- The grills, coils and drip trap must be dried before installing back in position.
- Record the quantity of Chemicals used on the service report.
- Click after cleaning pictures using a camera for evidence and service reports pictures.
- The access openings created must be sealed air tight so that it doesn't not hinder, restrict or alter the air flow within the system.
- Restart the system after ensuring that dampers, grills, filters and other equipment's are fixed in original position and are secured.
- Repeat the same procedures for the entire ducting on each floor, corridors, lift area.
- Dispose of the collected dust & debris in the customers waste disposal facility.
- Prepare an After Service Report (Crystalline form)

FCU, AHU & FAHU

- Clean all interior/ exterior of the housing surfaces, coils, blowers, air filters, Drain pan and frame.
- Clean all fans and related components and remove harmless visible biological contaminants using dry or wet cleaning.

Supply Diffuser & Return Grills

- All supply diffuser, return air grills will be removed, hand cleaned, sanitized and fixed it original position.
- Area around supply diffuser/return air grills will be vacuumed and all supply register will be covered using plastic sheets. This will be removed once cleaning is finished.

VERTICAL DUCTS:

- The vertical ducts will be accessed after making proper access with platform in coordination and after Serco approval.
- Physically entry into the ducts is not possible, hence we will clean the riser or the vertical ducts with the help of rotating brushes, air compressor and negative air vacuum.

PRE-OPERATIONAL PREPRATION FOR HVAC DUCT CLEANING

- Take measurement of the to determine the total surface area to be treated.
- Locate power outlets to plug the machines and water taps to wet clean certain fitting.
- Determine, location, and access to jobsite to prepare for equipment, access strategy and other material requirements.
- Prepare and check working condition of equipment.
- Prepare material supplies.



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ON SITE OPERATION FOR HVAC DUCT CLEANING

- Wear personal protective equipment, safety gloves, shoes, air mask and gloves .
- Position machines & equipment relative to power supply.
- Ensure that the area is covered with plastic sheets.

CLOSING ACTIVITIES:

- PTW – Permit to work must be closed.



RISK ASSESSMENT

| Hazard | Potential Hazard | Initial Assessment | | | Control Measures (List the controls to manage each of the hazards) | Re-Assessment | | |
|--------------------|--------------------------------------|--------------------|------------|-----------|---|---------------|---|---------------|
| | | L (1-5) | S (1-5) | Risk Rate | | L | S | Residual Risk |
| Confined space | Serious physical damage to employees | 4 | 4 | 16 | Follow permit to work, verify acceptable entry condition. Portable exhaust for forced ventilation of confined space. Use multi-gas detectors to measure oxygen, CO, LEL & H2S levels. Provision of retrieval/rescue equipment. Conduct safety briefing to identify the risk involved with each site. Using radio for continuous communication. Staff trained in confined space entry. | 2 | 4 | 8 |
| Electrical lights | Electrical shock & fire | 4 | 4 | 16 | Battery operated LED lights and head torches. Use of flame proof, waterproof & shatter proof electrical equipment. Preventive maintenance of all electrical equipments. Good housekeeping practices to be maintained at all times. | 2 | 4 | 8 |
| Pressure Washer | Bodily injury | 4 | 4 | 16 | Keep the area clear of non-essential, eye and hand protection to be worn always. TBT on the safe use of the machines. Maintain good housekeeping. | 1 | 4 | 4 |
| Working at heights | Physical damage | 4 | 4 | 16 | Use full PPE's. Use of long handled tools wherever appropriate. Full body harness and lifeline. Safety briefing to be conducted before starting the job. Take utmost precaution & controlled operations. All ladders/scaffolding to be checked prior start of work. | 1 | 4 | 4 |
| Chemical hazard | Burns and skin irritation | 4 | 4 | 16 | All PPE's such as Face mask, gloves and eye protection. Dilute the chemical concentration with water before starting the cleaning works. Carry eye wash if required. Conduct safety briefing before task. Keep MSDS of chemical on site for reference. | 1 | 4 | 4 |



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| Hard/sharp objects. | Head & body injury | 4 | 4 | 16 | Barricade and isolate all with warning signs. Use all PPE's. Identify the areas and use padding or wrapping to sharp edges. | 1 | 4 | 4 |
| Slips Trips & Falls | Head & body injury | 4 | 4 | 16 | Site supervisor to check all areas prior to commencement of work. Implementation of safe working practices and general housekeeping. Provision of anti-slip boots. Warning signs and isolate area. All aspects to be covered in Toolbox talk. | 1 | 4 | 4 |
| Waste disposal | Pollution | 4 | 4 | 16 | Use of environmental friendly bio degradable disinfectant to clean. Prevent contamination of sewage line, collect waste and debris for safe disposal. All empty chemical cans to be taken off site for safe disposal as per local regulations. | 1 | 4 | 4 |

| | | | | | |
|--|------|--|--|------------|---------|
| LIKELIHOOD | | <p style="text-align: center;">LIKELIHOOD</p> | <p style="text-align: center;">UNACCEPTABLE Stop activity and make immediate improvements</p> <p style="text-align: center;">TOLERABLE Look to improve within specified timescale</p> <p style="text-align: center;">ADEQUATE Improve at next review</p> <p style="text-align: center;">ACCEPTABLE No further action. Ensure controls are maintained</p> | | |
| <p>1. Very Unlikely - There's 1 in a million chance of the hazardous event happening.</p> <p>2. Unlikely - There's 1 in 100,000 chance of the hazardous event happening.</p> <p>3. Fairly Likely - There's 1 in 10,000 chance of the hazardous event happening.</p> <p>4. Likely - There's 1 in 1000 chance of the hazardous event happening.</p> <p>5. Very Likely - There's 1 in 100 chance of the hazardous event happening.</p> | | | | | |
| CONSEQUENCE | | | | | |
| <p>1.. Insignificant - No injury</p> <p>2. Minor - Minor injuries needing First Aid</p> <p>3. Moderate - Up to 3 days absent</p> <p>4. Major - More than 3 days absent</p> <p>5. Catastrophic - Death</p> | | | | | |
| | Name | Designation | Signature | Date | Remarks |
| Prepared By; | | Safety Supervisor | | 20-07-2019 | |
| Reviewed By: | | HSE | | 20-07-2019 | |