# Standard Operating Procedure (SOP)

## Ventilation and Air Quality Checks

This SOP defines the procedures for **ventilation and air quality checks** to ensure a healthy and safe environment. It includes guidelines for regular inspection and maintenance of ventilation systems, monitoring of air pollutants and contaminants, assessment of airflow and circulation, and corrective actions to improve air quality. The goal is to prevent respiratory hazards, promote occupant comfort, and comply with regulatory air quality standards in indoor and workspaces.

### 1. Purpose

To establish standardized procedures to maintain optimal indoor air quality and effective ventilation through routine inspections, monitoring, and corrective actions.

### 2. Scope

- All indoor areas and workspaces equipped with mechanical or natural ventilation.
- Applicable to facility management, maintenance staff, safety officers, and third-party service providers.

### 3. Responsibilities

- **Facility Manager:** Oversee compliance and scheduling.
- **Maintenance Staff:** Perform inspections, maintenance, and repairs.
- **Safety Officer:** Monitor air quality, document findings, and report issues.
- **Occupants:** Report perceived air quality issues or ventilation failures.

### 4. Procedure

1. **Inspection of Ventilation Systems**
   - Inspect and clean air intakes, ducts, vents, and filters at least quarterly or as per manufacturer recommendations.
   - Check for physical obstructions, dirt, mold growth, unusual noise, or odors.
2. **Air Quality Monitoring**
   - Measure key parameters: $CO_2$, CO, VOCs, particulate matter (PM2.5/PM10), humidity, and temperature using calibrated instruments.
   - Take readings at representative locations and document results.
3. **Assessment of Airflow and Circulation**
   - Ensure air movement is sufficient in all rooms. Test using anemometers or smoke tubes if required.
   - Check for dead zones or areas with stagnant air.
4. **Corrective Actions**
   - Replace or repair faulty filters, motors, or ventilation components as needed.
   - Increase ventilation rate, introduce air purifiers, or adjust HVAC settings if air quality is substandard.
   - Document actions taken and retest air quality parameters as needed.
5. **Record Keeping**
   - Maintain records of inspection dates, findings, maintenance actions, monitoring data, and follow-up activities for at least three years.

### 5. Compliance and References

- Follow local, state, and federal guidelines (e.g., OSHA, ASHRAE 62.1/62.2, EPA IAQ standards).
- Refer to manufacturer's operation and maintenance manuals for specific equipment instructions.

### 6. Review and Revision

- This SOP should be reviewed annually or when facilities, regulations, or technology change significantly.

### 7. Appendix: Sample Inspection Checklist

| Item | Frequency | Status | Notes |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Inspect and clean air filters | Monthly | | |
| Measure $CO_2$ levels | Quarterly | | |
| Check for mold and odors | Monthly | | |
| Test airflow velocity | Quarterly | | |