CAL POLY STATE UNIVERSITY
Workplace Ventilation Safety Policy

Environmental Health & Safety | Cal/OSHA Title 8 & CCR Title 19

1. Purpose

This policy establishes minimum workplace ventilation requirements to protect employee health, reduce exposure to airborne contaminants, and support fire and life safety in compliance with California Code of Regulations (CCR) Title 8 and Title 19.

2. Scope

This policy applies to all occupied buildings, shops, laboratories, maintenance areas, and workspaces where employees or contractors may be exposed to airborne hazards.

3. Regulatory Authority

• CCR Title 8 §5143 – Mechanical Ventilation Systems

• CCR Title 8 §5150 – Welding, Brazing, and Cutting

• CCR Title 8 §5153 – Spray Finishing Operations

• CCR Title 8 §5155 – Airborne Contaminant Exposure Limits

• CCR Title 8 §5141 – Control of Harmful Exposures

• CCR Title 19 – Fire and Panic Safety Regulations

4. General Ventilation Requirements

Mechanical ventilation systems shall be designed, operated, and maintained to prevent harmful exposure to airborne contaminants and shall operate continuously during processes for which they are required.

5. Welding, Brazing, and Cutting

• Local exhaust ventilation providing at least 100 linear feet per minute at the welding zone is required.

• Mechanical dilution ventilation or respiratory protection shall be provided where local exhaust is infeasible.

• Additional controls are required for hazardous metals such as chromium, cadmium, lead, and beryllium.

6. Spray Finishing Operations

• Spray operations shall be conducted in properly designed and ventilated spray booths or rooms.

• Mechanical ventilation must operate during spraying and until vapors are fully exhausted.

• Exhausted air shall not be recirculated.

• Ventilation shall maintain flammable vapors below 20% of the lower explosive limit (LEL).

7. Airborne Contaminants and Exposure Limits

Ventilation and controls shall ensure employee exposure does not exceed limits in CCR Title 8 §5155, including:

• Carbon monoxide – 25 ppm (8-hr TWA)

• Welding fumes (PNOR) – 5 mg/m^3

• Zinc oxide fumes – 5 mg/m^3

• Lead – 50 $\mu g/m^3$

• Hexavalent chromium – 5 $\mu g/m^3$

8. Nanomaterials and Metal Dust

• Nanomaterials and fine metal dust shall be controlled using local exhaust ventilation.

• Where no specific PEL exists, exposures shall be minimized per CCR Title 8 §5141.

• Exhaust air containing nanomaterials shall not be recirculated unless adequately filtered.

• A precautionary, exposure-minimization approach shall be applied.

9. Responsibilities

• Supervisors must assess tasks for ventilation needs.

• Facilities and EHS shall evaluate and maintain ventilation systems.

• Employees and contractors must comply with this policy.

10. Records and Compliance

Ventilation testing records, air monitoring results, and corrective actions shall be retained and made available for regulatory review.