

WAC 296-62-07411 Methods of compliance. (1) Compliance hierarchy.

(a) Except as specified in (b), (c), and (d) of this subsection, the employer must implement engineering and work practice controls to reduce and maintain employee exposure to cadmium at or below the PEL, except to the extent that the employer can demonstrate that such controls are not feasible.

(b) Except as specified in (c) and (d) of this subsection, in industries where a separate engineering control air limit (SECAL) has been specified for particular processes (Table I of this subsection), the employer must implement engineering and work practice controls to reduce and maintain employee exposure at or below the SECAL, except to the extent that the employer can demonstrate that such controls are not feasible.

Table I.—Separate Engineering Control Airborne Limits (SECALs) for Processes in Selected Industries

Industry	Process	SECAL ($\mu\text{g}/\text{m}^3$)
Nickel cadmium battery	Plate making, plate preparation	50
	All other processes	15
Zinc/Cadmium refining*	Cadmium refining, casting, melting, oxide production, sinter plant	50
Pigment manufacture	Calcine, crushing, milling, blending	50
	All other processes	15
Stabilizers*	Cadmium oxide charging, crushing, drying, blending	50
Lead smelting*	Sinter plant, blast furnace, baghouse, yard area	50
Plating*	Mechanical plating	15

* Processes in these industries that are not specified in this table must achieve the PEL using engineering controls and work practices as required in (a) of this subsection.

(c) The requirement to implement engineering and work practice controls to achieve the PEL or, where applicable, the SECAL does not apply where the employer demonstrates the following:

(i) The employee is only intermittently exposed; and

(ii) The employee is not exposed above the PEL on thirty or more days per year (twelve consecutive months).

(d) Wherever engineering and work practice controls are required and are not sufficient to reduce employee exposure to or below the PEL or, where applicable, the SECAL, the employer nonetheless must implement such controls to reduce exposures to the lowest levels achievable. The employer must supplement such controls with respiratory protection that complies with the requirements of WAC 296-62-07413 and the PEL.

(e) The employer must not use employee rotation as a method of compliance.

(2) Compliance program.

(a) Where the PEL is exceeded, the employer must establish and implement a written compliance program to reduce employee exposure to or below the PEL by means of engineering and work practice controls, as required by subsection (1) of this section. To the extent that engineering and work practice controls cannot reduce exposures to or be-

low the PEL, the employer must include in the written compliance program the use of appropriate respiratory protection to achieve compliance with the PEL.

(b) Written compliance programs must include at least the following:

(i) A description of each operation in which cadmium is emitted; e.g., machinery used, material processed, controls in place, crew size, employee job responsibilities, operating procedures, and maintenance practices;

(ii) A description of the specific means that will be employed to achieve compliance, including engineering plans and studies used to determine methods selected for controlling exposure to cadmium, as well as, where necessary, the use of appropriate respiratory protection to achieve the PEL;

(iii) A report of the technology considered in meeting the PEL;

(iv) Air monitoring data that document the sources of cadmium emissions;

(v) A detailed schedule for implementation of the program, including documentation such as copies of purchase orders for equipment, construction contracts, etc.;

(vi) A work practice program that includes items required under WAC 296-62-07415, 296-62-07417, and 296-62-07419;

(vii) A written plan for emergency situations, as specified in WAC 296-62-07415; and

(viii) Other relevant information.

(c) The written compliance programs must be reviewed and updated at least annually, or more often if necessary, to reflect significant changes in the employer's compliance status.

(d) Written compliance programs must be provided upon request for examination and copying to affected employees, designated employee representatives, and the director.

(3) Mechanical ventilation.

(a) When ventilation is used to control exposure, measurements that demonstrate the effectiveness of the system in controlling exposure, such as capture velocity, duct velocity, or static pressure must be made as necessary to maintain its effectiveness.

(b) Measurements of the system's effectiveness in controlling exposure must be made as necessary within five working days of any change in production, process, or control that might result in a significant increase in employee exposure to cadmium.

(c) Recirculation of air. If air from exhaust ventilation is recirculated into the workplace, the system must have a high efficiency filter and be monitored to ensure effectiveness.

(d) Procedures must be developed and implemented to minimize employee exposure to cadmium when maintenance of ventilation systems and changing of filters is being conducted.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 19-01-094, § 296-62-07411, filed 12/18/18, effective 1/18/19. Statutory Authority: Chapter 49.17 RCW. WSR 93-21-075 (Order 93-06), § 296-62-07411, filed 10/20/93, effective 12/1/93; WSR 93-07-044 (Order 93-01), § 296-62-07411, filed 3/13/93, effective 4/27/93.]