

WAC 296-848-20060 Exposure evaluations.

IMPORTANT:

1. This section applies when workplace operations create potential airborne exposure to inorganic arsenic.

2. When you conduct an exposure evaluation in a workplace where an employee uses a respirator, the protection provided by the respirator is not considered.

3. Following this section will fulfill the requirements to identify and evaluate respiratory hazards found in chapter 296-841 WAC, Airborne contaminants.

(1) You must conduct an employee exposure evaluation to accurately determine airborne concentrations of inorganic arsenic by completing Steps 1 through 5 of the Exposure Evaluation Process, each time any of the following apply:

(a) No evaluation has been conducted.

(b) Changes have occurred in any of the following areas that may result in new or increased exposures:

(i) Production.

(ii) Processes.

(iii) Exposure controls such as ventilation systems or work practices.

(iv) Personnel.

(c) You have any reason to suspect new or increased exposure may occur.

(2) You must provide affected employees and their designated representatives an opportunity to observe exposure monitoring during Step 4 of the Exposure Evaluation Process.

(a) Make sure observers do not interfere with exposure measurements.

(b) Make sure observers are entitled to:

(i) An explanation of your exposure measurement and monitoring procedures;

(ii) Observe all tasks of exposure measurement performed at the workplace; and

(iii) Receive a copy of the exposure measurement results when you obtain them; or are allowed to record the exposure measurement results, if made during observations.

(c) Make sure observers who enter areas with inorganic arsenic exposure:

(i) Are provided with and use the same protective clothing, respirators, and other personal protective equipment (PPE) that employees working in the area are required to use; and

(ii) Follow safety and health requirements that apply.

Exposure Evaluation Process

IMPORTANT:

Following the Exposure Evaluation Process is not necessary when you have documentation conclusively demonstrating inorganic arsenic exposures for a particular operation and material, cannot exceed the action level (AL) during any conditions reasonably anticipated. Documentation can be based on quantitative information such as soil test results OR qualitative information such as observations of how inorganic arsenic-containing materials are handled.

- Retain this documentation for as long as you rely on it.

Step 1: Identify all employees who have potential airborne exposure to inorganic arsenic in your workplace.

Step 2: Select employees from those identified in Step 1 who will have their eight-hour exposures monitored.

- Make sure the exposures of the employees selected represent eight-hour exposures for all employees identified in Step 1, including each job classification, work area, and shift.

Note: A written description of the procedure used for obtaining representative employee exposure monitoring results needs to be kept as part of your exposure records required by this chapter in Exposure records, WAC 296-848-20090. This description can be created while completing Steps 2 through 4 of this exposure evaluation process.

Step 3: Determine how you'll obtain employee exposure monitoring results.

- Select and use a method that meets the following criteria for accuracy:

- $\pm 25\%$, with a confidence level of 95%, when concentrations are potentially at or above an eight-hour time-weighted average of 10 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$); or

- $\pm 35\%$, with a confidence level of 95%, when concentrations are potentially between the eight-hour time-weighted averages of 5 $\mu\text{g}/\text{m}^3$ and 10 $\mu\text{g}/\text{m}^3$.

Note: Here are examples of methods that meet this accuracy requirement:

1. OSHA Method ID105 found by going to <http://www.osha.gov/dts/sltc/methods/>.
2. NIOSH method 7901 found by going to <http://www.cdc.gov/niosh/homepage.html> and linking to the NIOSH Manual of Analytical Methods.

Step 4: Obtain employee exposure monitoring results by collecting air samples representing employees identified in Step 1.

- Sample at least one shift representative of the eight-hour exposure, for each employee selected in Step 2.

- Make sure samples are collected from each selected employee's breathing zone.

Note: 1. You may use any sampling method that meets the accuracies specified in Step 3. Examples of these methods include:

- a. Real-time monitors that provide immediate exposure monitoring results.
 - b. Equipment that collects samples that are sent to a laboratory for analysis.
2. The following are examples of methods for collecting samples representative of eight-hour exposures.
- a. Collect one or more continuous samples, for example, a single eight-hour sample or four two-hour samples.
 - b. Take a minimum of 4 to 7 brief samples, such as fifteen-minute samples, during the work shift and at times selected randomly.
 3. For work shifts longer than eight hours, monitor the continuous eight-hour portion of the shift expected to have the highest average exposure concentration.

Step 5: Have the samples you collected analyzed to obtain monitoring results representing eight-hour exposures.

- Go to the Scope of this chapter, WAC 296-848-100, and compare employee exposure monitoring results to the values found in Step 1 and follow Step 2 to determine if additional sections of this chapter apply.

Note: 1. You may contact your local DOSH consultant for help:

- a. Interpreting data or other information.
 - b. Determining eight-hour employee exposure monitoring results.
2. To contact a WISHA consultant:
- a. Go to the Safety and health core rules, chapter 296-800 WAC.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 18-22-116, § 296-848-20060, filed 11/6/18, effective 12/7/18; WSR 07-06-005, § 296-848-20060, filed 2/22/07, effective 4/1/07; WSR 05-01-173, § 296-848-20060, filed 12/21/04, effective 5/1/05.]