Identify and evaluate respiratory hazards.

You must:
- Make sure employees are protected from potentially hazardous exposure while you perform your evaluation
- Perform your evaluation without considering the protection provided to employees by a respirator
- Determine the form of the hazard, such as dust, mist, gas, oxygen deficiency, or biological agent
- Make sure you consider:
  - Potential emergency and rescue situations that may occur, such as equipment or power failures, uncontrolled chemical reactions, fire, explosion, or human error
  - Workplace conditions such as work processes, types of material, control methods, work practices and environmental conditions.
- Determine or reasonably estimate whether any employee is or could be exposed to any of the following:
  - Any airborne substance above a permissible exposure limit (PEL) listed in Table 3
  - A substance at or above the action level (AL) specified in the rule for that substance
  - Any other respiratory hazard.
- Use any of the following to determine employee exposure:
  - Information that would allow an estimate of the level of employee exposure, such as MSDSs or pesticide labels, observations, measurements or calculations
  - Data demonstrating that a particular product, material or activity cannot result in employee exposure at or above the AL or PEL
  - Personal air samples that represent an employee's usual or worst case exposure for the entire shift.

Note:
- Rules for specific substances may contain additional requirements for determining employee exposure.
- Use methods of sampling and analysis that have been validated by the laboratory performing the analysis.
- Samples from a representative group of employees may be used for other employees performing the same work activities when the duration and level of exposure are similar.

You must:
- Consider the atmosphere to be immediately dangerous to life or health (IDLH) when you cannot determine or reasonably estimate employee exposure
- Make sure employee exposure, to 2 or more substances with additive health effects, is evaluated using this formula:

\[
E_m = \frac{C_1}{L_1} + \frac{C_2}{L_2} + \ldots + \frac{C_n}{L_n}
\]

<table>
<thead>
<tr>
<th>The symbol</th>
<th>Is the ...</th>
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<tbody>
<tr>
<td>E</td>
<td>Equivalent exposure for the mixture. When the value of E is greater than 1, a respiratory hazard is present.</td>
</tr>
<tr>
<td>C</td>
<td>Concentration of a particular substance.</td>
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<tr>
<td>L</td>
<td>TWA, STEL, or ceiling for that substance from Table 3.</td>
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</tbody>
</table>

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 05-01-166, § 296-307-62605, filed 12/21/04, effective 4/2/05.]