

# Step-by-Step E Compliance Demonstration

## Overall Control Efficiency, Single SRS, CEMs

### ' 63.3370 (e) and (i)(2)

**Overview:** This approach is valid when using Continuous Emission Monitors on a Solvent Recovery System to demonstrate compliance with MACT limits on a monthly basis. If you have one or more intermittently-controlled work station or one or more never-controlled work station, you must use Step-by-Step H.

<b>MACT limits</b>
<u>Existing Affected Sources</u> R = $\geq$ 95%
<u>New Affected Sources</u> R = $\geq$ 98%

In this approach, a facility needs to:

1. Demonstrate efficiency of the capture system.
2. Demonstrate removal efficiency of solvent recovery system.
3. Monitor capture system operating parameters.
4. Demonstrate overall control efficiency.
5. Compare overall efficiencies to MACT control requirements.
6. Maintain monitoring and other compliance records.

<b>Detailed Approach</b>	<b>Citation</b>
<p><b>1. Demonstrate efficiency of the capture system through one of the following methods:</b></p> <ul style="list-style-type: none"> <li>• Install a Permanent Total Enclosure (PTE) and demonstrate that enclosure meets the requirements of Section 6 of EPA Method 204 [§63.3360(f)(1)].</li> <li>• Determine capture efficiency according to the protocols for testing with temporary total enclosures as spelled out in Method 204 and 204A through F of 40 CFR part 51, Appendix M [§63.3360(f)(2)].</li> <li>• Determine capture efficiency using any protocol and test method that satisfies the criteria of either the Data Quality Objective or the Lower Confidence Limit approach (40 CFR part 63, subpart KK, Appendix A) [§63.3360(f)(3)]</li> </ul>	' 63.3370(i)(2)(iii)
<p><b>2. Demonstrate removal efficiency of solvent recovery system</b></p> <ul style="list-style-type: none"> <li>• Continuously monitor the gas stream entering and exiting the control device to determine the total organic volatile matter mass flow rate</li> <li>• Use Equation 2 of §63.3360(e)(3)(D)(ix) to determine removal efficiency, E.</li> </ul>	§63.3370(i)(2)(i)
<p><b>3. Monitor capture system operating parameters</b></p> <ul style="list-style-type: none"> <li>• Install, calibrate, operate, and maintain a mass flow meter at the SRS inlet and outlet to determine the volatile matter reduction efficiency. The CEM must comply with performance specification 6, 8, or 9 of 40 CFR part 60, appendix B, as appropriate.</li> <li>• Follow procedure 1, 40 CFR part 60, appendix F using compounds representative of the gaseous emission stream being controlled</li> </ul>	<p>' 63.3350(d)(1)(i)</p> <p>' 63.3350(d)(1)(ii)</p>

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Detailed Approach	Citation
<ul style="list-style-type: none"> <li>• Collect valid data from 90% of the operating hours</li> <li>• Develop a capture system monitoring plan and monitor the capture system operating parameters [ ' 63.3350(f)]</li> </ul>	' 63.3350(d)(1)(iii) ' 63.3370(i)(2)(ii)
<b>4. Demonstrate Overall Control Efficiency</b> <ul style="list-style-type: none"> <li>• Calculate overall control efficiency, R, using Equation 11 of ' 63.3370(i)(2)(iv)</li> </ul>	§63.3370(i)(2)(iv)
<b>5. Compare overall efficiencies to MACT control requirements.</b> <ul style="list-style-type: none"> <li>• You are in compliance if R is equal to or greater than the 95 percent for existing affected sources or 98 percent for new affected sources</li> </ul>	§63.3370(i)(2)(xi)(A)
<b>6. Maintain monitoring and other compliance records.</b> <ul style="list-style-type: none"> <li>• Maintain records of continuous emission monitoring data.</li> <li>• Maintain records of control device and capture system operating parameter data</li> <li>• Maintain records of overall control efficiency determination using capture efficiency and removal efficiency test results.</li> <li>• Maintain maintenance and calibration records for each mass flow meter</li> </ul>	§63.3410(a)(1)(i) §63.3410(a)(1)(ii)  §63.3410(a)(1)(v)  §63.3410(a)(2) and §63.10(c)

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