

<b>MACT Subpart JJJJ</b>		
<b>Work Practice, Testing, Monitoring, Recordkeeping, and Reporting Summary Table</b>		
<b>Requirement</b>	<b>MACT Part 63, Subpart A</b>	<b>MACT Part 63, Subpart JJJJ</b>
<b>Applicability</b>	<p>➤ New/reconstructed major sources must submit application for pre construction review by EPA, or by the applicable state program that has been delegated MACT standard enforcement responsibilities [40 CFR §63.5]</p>	<p>(1) Applies to each new and existing major source of HAPs with web coating lines [40 CFR §63.3290]</p> <p>(2) Applies to all web coating lines including both metal webs used in flexible packaging and fabric substrates used in pressure sensitive tape and abrasive material manufacture [§63.3290]</p> <p>(3) Specifically excluded are lines covered under: [§63.3300, § 63.3310]</p> <ul style="list-style-type: none"> <li>• Subpart KK, Printing and Publishing (Packaging Rotogravure or Wide-Web Flexographic Printing)</li> <li>• Subpart EE, Magnetic Tape Manufacturing (web coating in Lithography or Screen printing or Letterpress or narrow web Flexographic printing processes)</li> <li>• Subpart SSSS, Metal Coil Coating Operations (0.15 millimeters or greater webs)</li> <li>• Subpart OOOO, Printing, Coating, and Dying of Fabric (woven, knitted, plaited, braded, felted, non woven materials made of filaments, fibers, or yarn both natural and manmade)</li> <li>• Web coating on research or laboratory equipment</li> </ul>

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<b>Emission / Operating Limits</b>		<p>(1) No more than 5% organic HAP applied each month at existing sources and no more than 2% organic HAP applied each month at new sources [40 CFR §63.3320 (b) (1)], <i>or</i></p> <p>(2) HAP is no more than 4% of mass of coating materials applied each month at existing sources and HAP is no more than 1.6% of mass of coating materials applied each month at new sources [§63.3320 (b) (2)], <i>or</i></p> <p>(3) HAP is no more than 20% of mass of coating solids applied each month at existing sources and HAP is no more than 8% of coating solids applied each month at new sources [§63.3320 (b) (3)], <i>or</i></p> <p>(4) If using an oxidizer, the unit must maintain an outlet concentration of no more than 20 PPM HAP by dry volume plus a capture efficiency of 100% [§63.3320 (b) (4)].</p>

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<b>Other - Work Practice Standards</b>	<ul style="list-style-type: none"> <li>➤ Operate and maintain source and control equipment consistent with good air pollution control practices [40 CFR §63.6(e)(1)]</li> <li>➤ Develop and implement a written start-up, shutdown, and malfunction plan (SSMP) for affected source and control equipment [§63.6(e)(3)]</li> </ul>	<p>(1) When complying by using Liquid-to-Liquid Mass Balance (LLMB), measure cumulative amount of volatile matter and HAP consumed and amount of volatile matter recovered by the solvent recovery device. [40 CFR §63.3350(d)(2)].</p> <p>(2) When complying by using Thermal Oxidation, maintain a rolling 3-hour average combustion zone temperature at or above that demonstrated during the compliance test [§63.3350(e), §63.3360 (e) (3) (i)].</p> <p>(3) When complying by using Catalytic Oxidation, maintain a rolling 3-hour average catalyst bed inlet temperature at or above that demonstrated during the compliance test [§63.3350(e), §63.3360 (e) (3) (ii)].</p> <p>(4) When complying by using Catalytic Oxidizers, maintain temperature rise across catalyst bed consistent with that demonstrated during the compliance test. Alternatively maintain inlet temperature consistent with that demonstrated during the initial compliance test and implement an inspection and maintenance plan for the oxidizer [§63.3350(e), §63.3360 (e) (3) (ii) (A), (B), (C), and (D)].</p> <p>(5) When using capture systems with thermal or catalytic oxidizers, submit a monitoring plan outlining specific parameters that demonstrate continuing compliance with the capture levels demonstrated during the initial compliance test [§63.3350 (f)].</p>

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<b>Testing</b>	<ul style="list-style-type: none"> <li>➤ If required, initial performance test must be performed within 180 days of the effective date of standard or after initial start-up of new unit [40 CFR §63.7(a)].</li> <li>➤ Notification of test at least 60 days in advance [§63.7(b)].</li> <li>➤ Development and, if requested, submittal of site-specific test plan at least 60 days in advance of test [§63.7(c)].</li> <li>➤ Performance test shall be conducted under normal operating conditions [§63.7(e)].</li> <li>➤ CMS Performance Evaluations for VOC inlet/outlet mass rate monitoring system with initial test [§63.8(e)].</li> </ul>	<p>(1) If complying by limiting organic HAP, determine the organic HAP mass fraction of each coating “as-purchased” or “as-applied”, as applicable, using specified analytical procedures or by formulation data [§ 40 CFR 63.3360 (c)]. Alternatively, if using organic volatile content as a surrogate for HAP, determine for each coating, as applicable, the volatile organic content and solids content of “as-purchased” or “as-applied” coating per specified analytical procedures or by formulation data [§ 40 CFR 63.3360 (d)]. Furthermore, determine retained HAP or volatile matter in the coated web per specified analytical procedures [40 CFR §63.3360 (g)].</p> <p>(2) If complying by using LLMB, a performance test is not required [§ 40 CFR 63.3360 (a)]. Conduct monthly LLMB. Determine and document organic HAP or volatile matter and if needed coating solids content of each coating per specified analytical procedures [§ 63.3360 (c) or (d)].</p> <p>(3) If complying by using an add-on control device, other than solvent recovery for LLMB, perform a control device efficiency test (inlet and outlet mass flow rate on dry bases) using specified test protocols [§ 40 CFR 63.3360 (e)].</p> <p>(4) If complying by using a control device with a capture system, perform a capture efficiency test using specified test protocols (M204 of §40 CFR 51, appendix M) [§ 40 CFR 63.3360 (f)].</p> <p>(6) If complying by using a series of add-on control devices, the performance test must include the inlet to the first control device in series, the outlet of the last control device in series, and all intermediate streams that are not treated by the control devices [§63.3360 (h)].</p> <p>(7) If complying by using an add-on control device, except solvent recovery for LLMB, operate the parametric monitoring system during the initial compliance test to facilitate establishment of operating limits [§63.3360 (e) (3)].</p> <p>(8) See also Subpart A.</p>

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<b>Equipment Monitoring</b>	<ul style="list-style-type: none"> <li>➤ Operate and maintain CEMS consistent with good air pollution control practices, in accordance with manufacturer’s specifications for installation, operation and calibration [40 CFR §63.8(c)(1) -(c)(3)].</li> <li>➤ Conduct daily zero and span calibration checks [§63.8(c)(6)].</li> </ul>	<p>(1) For solvent recovery systems, install, calibrate, operate and maintain Continuous Emission Monitors (CEMS) to determine mass flow rate into and out of the device and perform quarterly audits. Alternatively, install, calibrate, maintain, and operate a device that indicates the cumulative amount of volatile matter recovered and conduct a LLMB monthly [§40 CFR 63.3350 (d)].</p> <p>(2) For Thermal Oxidizers, install, calibrate, operate, and maintain Continuous Parametric Monitors (CPMs) minimally consisting of a temperature sensor in the combustion zone and a continuous recorder (chart / data logger) [§63.3350 (e) (9) (ii)].</p> <p>(3) For Catalytic Oxidizers, install, calibrate, operate, and maintain CPMs minimally consisting of temperature sensors at the inlet and outlet of the catalyst chamber and a continuous recorder [§63.3350 (e) (9) (iii)].</p> <p>(4) For capture systems used with a control device, monitor capture efficiency parameter(s) in accordance with capture efficiency monitoring plan [§63.3350 (f)].</p> <p>For intermittently controlled workstations, monitor bypasses of the control device and the mass of each coating material applied at the affected workstation during each bypass [§63.3350 (c)].</p>

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<p><b>Recordkeeping</b></p>	<ul style="list-style-type: none"> <li>➤ Written SSM plan for the source, control system, and monitoring system [§63.6(e)(3)(v)].</li> <li>➤ Records showing consistency of actions with SSM plan [§63.6(e)(3)(iii), §63.10(b)(2)].</li> <li>➤ Records showing any actions inconsistent with SSM plan [§63.6(e)(3)(iv)].</li> <li>➤ Written CMS quality control program [§63.8(d)].</li> <li>➤ A record of data from CMS measurements, audits, calibrations, and malfunctions [§63.10(b)(2), §63.10(c)].</li> <li>➤ Records of all reports and notifications [§63.10(b)].</li> <li>➤ Records of each applicability determination [§63.10(b)(3)].</li> </ul>	<ol style="list-style-type: none"> <li>(1) All required records must be maintained on a monthly basis [40 CFR §63.3410 (a)].</li> <li>(2) Maintain all Continuous Emission Monitoring (CEM) and audit data from solvent recovery operations that determine mass flow rate into and out of the control device. For LLMB, maintain CEM data from recovered solvent totalizer [§63.3410 (a) (1) (i)].</li> <li>(3) Maintain records of each monthly LLMB performed [§63.3410 (b)].</li> <li>(4) Maintain monitoring records of any bypass of intermittently controlled work stations plus mass of each coating material applied on the intermittently controlled work station when bypassing the control device [§63.3410 (a) (1) (ii)].</li> <li>(5) Maintain Continuous Parametric Monitoring (CPM) records for add-on control devices (Thermal and Catalytic Oxidizers) and associated capture systems [§63.3410 (a) (1) (ii)].</li> <li>(6) Maintain overall control efficiency determination using capture and control device efficiencies from CPM records [§63.3410 (a) (1) (v)].</li> <li>(7) If determining compliance by means other than control device efficiency, maintain records of organic HAP content data for “as-purchased” or “as-applied” coatings as applicable [§63.3410 (a) (1) (iii)].</li> <li>(8) If determining compliance by means other than control device efficiency and using organic volatile content as a surrogate for HAP, maintain records of organic volatile and, if needed, solids content data for “as-purchased” or “as-applied” coatings as applicable [§63.3410 (a) (1) (iv)].</li> <li>(9) Maintain coating material usage, organic HAP usage, volatile matter usage, coating solids usage as applicable, and compliance demonstration for “as-purchased compliant” coatings, or “as-applied compliant” coatings, and monthly allowable organic HAP [§63.3410 (a) (1) (vi)].</li> <li>(10) Maintain monitoring and inspection records for each control device and capture system consistent with the SSM plan [§63.3410 (a) (2)].</li> <li>(11) See Subpart A.</li> </ol>
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<b>Reporting</b>	<ul style="list-style-type: none"> <li>➤ Initial notification of standard applicability [§63.9(b)].</li> <li>➤ SSM plan submittal, if requested [§63.6(e)(3)(v)].</li> <li>➤ Notification of initial performance test and submittal of site-specific test plan if requested [§63.7(b), 7(c) &amp; 9(e)].</li> <li>➤ Submittal of test report [§63.7(g)].</li> <li>➤ Semiannual SSM reports [§63.10(d)(5)(I)] and Reports on inconsistencies with SSM plan [§63.6(e)(3)(iv)].</li> </ul> <p>Notification of CMS performance evaluation, submittal of evaluation plan and results [§63.8(e), 9(g)(1) &amp; 10(e)(2)].</p>	<ul style="list-style-type: none"> <li>(1) Submit an initial notification for existing affected sources within 1 year of compliance date [§ 40 CFR 63.3400 (b) (1)].</li> <li>(2) As applicable, submit a notification for new or reconstructed sources [§ 40 CFR 63.3400 (b) (2)].</li> <li>(3) Submit semiannual compliance reports [§ 40 CFR 63.3400 (c)].</li> <li>(4) Submit Notification of Performance test if applicable (thermal or catalytic oxidizers) [§ 40 CFR 63.3400 (d)].</li> <li>(5) Submit notification of compliance status [§ 40 CFR 63.3400 (e)].</li> <li>(6) Submit performance test reports if using thermal or catalytic oxidizers [§ 40 CFR 63.3400 (f)].</li> <li>(7) Submit startup, shutdown, and malfunction reports specified in 40 CFR 63.10 (d) (5) [§ 40 CFR 63.3400 (g)].</li> <li>(8) See also Subpart A.</li> <li>(9) See also Compliance Timeline.</li> </ul>