

**Iron and Steel Foundry MACT**  
(Final rule signed August 29, 2003)

<b>Emission Source</b>	<b>Emission Limit or Work Practice Standard</b>	<b>Comment</b>	<b>Monitoring Requirements</b>	<b>Compliance Demonstration</b>	<b>Compliance Date</b>
<b>Cupolas</b> <b>Existing</b> Cupolas	<b>PM</b> limit of 0.006 gr/dscf <b>or</b> Total metal HAP of 0.0005 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	3 years from rule publication
<b>New</b> Cupolas	<b>PM</b> limit of 0.002 gr/dscf <b>or</b> Total metal HAP of 0.0002 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	At start-up of new cupola
<b>All new &amp; existing</b> Cupolas	<b>VOHAP</b> limit of 20 ppmv (corrected to 10% O <sub>2</sub> )	Afterburners at ∞ 1300 °F (15 min. avg.) ( Accommodations for start-up and off blast time )	Afterburner temperature (continuous)	Initial compliance stack test (note 3) Repeated at least every 5 years	3 years for existing cupolas At start-up for new cupolas
<b>Electric Melting Furnaces</b> <b>Existing</b> Induction & Electric Arc Furnaces	<b>PM</b> limit of 0.005 gr/dscf <b>or</b> Total metal HAP of 0.0004 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	3 years from rule publication
<b>New</b> Induction Furnaces	<b>PM</b> limit of 0.001 gr/dscf <b>or</b> Total metal HAP of 0.00008 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	At start-up for new furnaces
<b>New</b> Electric Arc Furnaces	<b>PM</b> limit of 0.002 gr/dscf <b>or</b> Total metal HAP of 0.0002 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	
<b>All Melting Furnaces</b>	Scrap Certification <b>or</b>  Scrap Selection and Inspection Program	Supplier Certification: No post-consumer automotive scrap, oily turnings, plastics, mercury switches, lead, or organic liquids.  Supplier certifies no Hg switches or Pb components and foundry inspects all incoming scrap according to written program and procedures. Also restrictions on oil and free liquids .	Written plan with heavy on-going documentation	Certify that plan has been prepared.	1 year from rule publication  1 year from rule publication
<b>Scrap Preheater</b> <b>Existing</b> Scrap Preheaters	<b>PM</b> limit of 0.005 gr/dscf <b>or</b> Total metal HAP of 0.0004 gr/dscf		Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	3 years from rule publication
<b>New</b> Scrap Preheaters	a) <b>VOHAP</b> limit of 20 ppmv (good engineering capture system) <b>or</b> b) Direct contact gas-fired preheater <b>or</b> c) Scrap Certification  <b>PM</b> limit of 0.001 gr/dscf <b>or</b> Total metal HAP of 0.0008 gr/dscf  <b>VOHAP</b> limit of 20 ppmv (good engineering capture system) <b>or</b> Scrap Certification	Implies afterburner if not b) of c)  If not direct contact = afterburner    Possible afterburner, if not heavy flame penetration or Scrap Certification	Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 3) Certify direct flame contact type.  Start-up performance testing (note 2) Repeated at least every 5 years  Initial compliance stack test (note 3) Certify that plan has been prepared.	3 years from rule publication 3 years from rule publication 1 year from rule publication  At start-up of new preheaters  1 year from rule publication
<b>Pouring</b> <b>Existing</b> Pouring Stations	<b>PM</b> limit of 0.010 gr/dscf <b>or</b> Total metal HAP of 0.0008 gr/dscf	If existing emissions discharged to the atmosphere through a "conveyance".	Broken bag detectors, P, etc. (Note 1)	Initial compliance stack test (note 2) Repeated at least every 5 years	3 years from rule publication
<b>New</b> Pouring Stations or pouring Areas	<b>PM</b> limit of 0.002 gr/dscf <b>or</b> Total metal HAP of 0.0002 gr/dscf	If emissions discharged to the atmosphere through a "conveyance".	Broken bag detectors, P, etc. (Note 1)	Start-up performance testing (note 2) Repeated at least every 5 years	At start-up for new lines

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<b>Mold Vent Light-off</b>	Mold vents spontaneously ignite or they are manually ignited	Contains procedures for igniting mold vents at pouring stations and areas if it is determined that they do not spontaneously ignite.	Documentation required.	Certify that plan has been prepared	3 years from rule publication
<b>Fugitive Emissions</b> from a building or structure.	<b>Building opacity</b> 20% opacity, except for one 6-minute period per hour that does not exceed 27% opacity.	Applies to all building openings. (designed to monitor uncollected pouring, cooling & shakeout)	Formal opacity readings.	Initial opacity reading. (Note 4) Repeated every 6 months thereafter	3 years from rule publication
<b>Cooling and Shakeout</b>  <b>New</b> Cooling and Shakeout lines	<b>VOHAP</b> limit of 20 ppmv (flow weighted average)	Emissions must be captured.  For automated conveyor and pallet lines that use sand mold systems or automated shakeout lines that use sand mold systems	Continuous Emissions Monitoring (CEMS) required.	Start-up performance stack test	At start-up
<b>Written Plans</b>  Operation & Maintenance Plan	Describes capture and control systems, lists system parameters appropriate to evaluate performance, and establishes operating limits for those parameters. The plan also must include requirements for system inspections, PM procedures (with schedules), and procedures for corrective actions. Bag leak detectors required on all collection devices with PM limits.  Mold Vent Light Off (Part of O & M Plan)	Also must contain many details of system, including damper settings, gauge settings, test points, etc.  Contains procedures for igniting mold vents at pouring stations and pouring areas if it is determined that they do not spontaneously ignite.	Routine documented inspections.  Documentation required.	Certify that plan has been prepared and that the foundry will operate equipment according to the plan. Semiannual deviation reports.  Certify that plan has been prepared. Semiannual compliance certification Stating that the procedures have Been followed.	3 years from rule publication  3 year from rule publication
Start-up, Shutdown & Malfunction Plan	Must meet requirements of § 63.6 (e) of NESHAP General Provisions (68 FR 32586, May 30, 2003)				3 years from rule publication
Scrap Selection & Inspection Plan	See above, under All Melting Furnaces			Certify that plan has been prepared (if plan is required).	1 year from rule publication
Furan warm box mold of core making	No methanol, as listed in the MSDS (applies to catalyst portion only)				
Triethylamine (TEA) cold box mold or core production (new or existing facilities)	Control discharge of scrubber to 1 ppmv TEA or demonstrate a 99% control efficiency (as determined with fresh acid solution)		Scrubber parameters, including pH and liquid flow. pH < 4.5 measured at end of shift.	Initial compliance stack test Repeated at least every 5 years	3 years from rule publication

Note 1: Continuous Parametric Monitoring System (CPMS) required. Implies continuous readings available, but does not mandate continuous record. Recording frequency to be described in O&M Plan.

Note 2: To determine compliance with the metal HAP emissions limits, EPA Method 1 through 4, and either Method 5, 5B, 5D, 5F, or 5I, as applicable (to measure PM) or Method 29 (to measure total metal HAP) are required.

Note 3: To determine compliance with the organic HAP limits, use EPA Method 18 to measure VOHAP, Method 25 to measure total gaseous non-methane organics (TGNMO) as hexane, or Method 25A to measure total organic compounds (TOC) as hexane.

Note 4: To measure opacity, use EPA method 9.