



## MACT STANDARDS UPDATE

Last Updated March 18, 2008

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### Clean Air Act - Title III – Section 112(d) – 40 CFR 63 NESHAP

MACT STANDARD Source Categories Affected	CFR Subpart	Original Final Fed Register Date & Citation	Compliance Date <sup>1</sup> (for existing sources)	Source Category Applicability Summaries <sup>2</sup>
<u>Acetal Resins Production</u>	YY (Generic MACT) <sup>3</sup>	6/29/1999 (64FR34853)	06/29/2002	Applies to major HAP sources that consist of Acetal Resins production units. Acetal Resins production means the production of homopolymers and/ or copolymers of alternating oxymethylene units.
<u>Acrylic/Modacrylic Fibers Production</u>	YY (Generic MACT) <sup>3</sup>	6/29/1999 (64FR34853)	06/29/2002	Applies to major HAP sources that consist of Acrylic and Modacrylic fiber production units.
Aerosol Can-Filling Facilities		Delisted 11/18/1999 (64FR63025)		
<u>Aerospace Industry</u>	GG	09/01/1995 (60FR45948)	09/01/1998	Applies to major sources of HAP engaged in the manufacture or rework of commercial, civil, or military aerospace vehicles or components.
Alumina Processing		Delisted 01/30/2001 (66FR8220)		
Antimony Oxides Manufacturing		Delisted 11/18/1999 (64FR63025)		
Asbestos Processing		Delisted 11/30/1995 (60FR61550)		
Asphalt Concrete Manufacturing		Delisted 02/12/2002 (67FR6521)		
<u>Asphalt Roofing &amp; Asphalt Processing</u>	LLLL	04/29/2003 (68FR22976)	05/01/2006	Applies to asphalt processing facilities, petroleum refineries, and asphalt roofing manufacturing facilities that are major sources of HAP.
<u>Automobile &amp; Light Duty Trucks (Surface Coating)</u>	IIII	04/26/2004 (69FR22602)	04/26/2007	Applies to major sources of HAP that surface coat either automobile or light-duty truck bodies or collections of body parts for automobiles or light-duty trucks. Applies to automobile or light-duty truck assembly plants only, not auto body shops.

<b><u>Boat Manufacturing</u></b>	VVVV	08/22/2001 (66FR44217)	8/22/2004	Applies to resin and gel-coat operations at fiberglass boat manufacturing facilities, painting and coating operations at aluminum boat manufacturing facilities and; carpet and fabric adhesive operations at all boat manufacturing facilities. Applies to recreational boat manufacturing. Only major HAP sources are subject.
<b><u>Brick and Structural Clay Products &amp; Clay Ceramic Manufacturing</u></b>	JJJJ KKKK	05/16/2003 (68FR26690)	05/16/2006	Applies to major sources of HAP that process raw clay and shale, then form, dry and fire the processed materials into bricks, tile, sanitaryware, or other clay products.
<b><u>Carbon Black Production</u></b>	YY (Generic MACT) <sup>3</sup>	07/12/2002 (67FR46257)	07/12/2005	Applies to major sources of HAP that produce Carbon Black.
<b><u>Cellulose Manufacturing</u></b>	UUUU	06/11/2002 (67FR40044)	06/11/2005	Applies to major HAP sources that include both the Miscellaneous Viscose Process and Cellulose Ether Production. This includes food casing, rayon, cellulosic sponge, and cellophane operations.
Chromium Chemical Manufacturing		Delisted 06/04/1996 (61FR28197)		
<b><u>Chromium Electroplating</u></b>	N	01/25/1995 (60FR4948)	01/25/1996 or 01/25/1997	Applies to chromium emissions from hard and decorative electroplating and chromium anodizing sources. Applies to both major and area (non-major) HAP sources.
Coke By-Product Plants		Delisted 01/30/2001 (66FR8220)		
<b><u>Coke Ovens</u></b> (Charging, Top Side and Door Leaks)	L	10/27/1993 (58FR57898)	Varies by Source	Applies to by-product and non-recovery coke oven batteries at coke plants. A <i>coke battery</i> is a group of ovens connected by common walls where coal undergoes destructive distillation to produce coke. Coke is primarily used to make convert iron ore to iron which is further refined to produce steel.
<b><u>Coke Ovens</u></b> (Pushing, Quenching & Battery Stacks)	CCCC	04/14/2003 (68FR18007)	04/14/2006	Applies to by-product and non-recovery coke oven batteries at coke plants that are major sources of HAP. See definition of coke battery above.
<b><u>Combustion Turbines</u></b>	YYYY	03/05/2004 (69FR10511)	03/05/2004	Applies to all equipment and components of a combustion turbine steam/electric generating system located at a major source of HAP. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. Only applies to new sources.
<b><u>Commercial Sterilizers</u></b> (Ethylene Oxide)	O	12/06/1994 (59FR62585)	12/06/1998	Applies to major and area (non-major) HAP sources that use more than one Ton of ethylene oxide per rolling 12-month period to sterilize or fumigate materials. Exempt facilities include those that exist primarily to provide medical services to human and animals (hospitals, clinics, doctor offices)
<b><u>Cyanide Chemical Production</u></b>	YY (Generic MACT) <sup>3</sup>	07/12/2002 (67FR46257)	07/12/2005	Applies to major HAP sources that produce cyanide chemical products, including hydrogen cyanide, potassium cyanide and sodium cyanide, which are manufactured as a primary product, or a byproduct of Sohio process.
Cyanuric Chloride Production		Delisted 02/12/1998 (63FR7155)		
<b><u>Degreasing Organic Cleaners (Halogenated Solvent Cleaning)</u></b>	T	12/02/1994 (59FR61801)	12/02/1997	Applies to major and area (non-major) sources with batch cold, batch vapor and in-line solvent cleaning machines using a single regulated HAP halogenated solvent, or any combination of halogenated HAP solvents, in their parts cleaning machine(s) in a total concentration greater than 5% by weight.

<b><u>Dry Cleaning (Perc)</u></b>	M	09/22/1993 (58FR49354)	09/23/1996	Applies to major and area (non-major) HAP sources with dry cleaning operations using perchloroethylene (tetrachloroethylene) as the dry cleaning solvent.
Electric Arc Furnace: Stainless & Non-Stainless Steel		Delisted 06/04/1996 (61FR28197)		
<b><u>Electric Utility Steam Generating Units</u></b>	UUUUU			Applies to coal-fired and oil-fired electric utility steam generating units at major HAP sources.
<b><u>Engine Test Cells/Standards</u></b>	PPPPP	05/27/2003 (68FR28774)	05/27/2003	Applies to any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) engines at major sources of HAP. Only applies to new sources.
<b><u>Ethylene Manufacturing</u></b>	YY (Generic MACT) <sup>3</sup>	07/12/2002 (67FR46257)	07/12/2005	Applies to major sources of HAP that produce ethylene. This is specific to where ethylene and/or propylene are produced by separation from petroleum refining process streams or by subjecting hydrocarbons to high temperatures in the presence of steam.
<b><u>Fabric &amp; Other Textile Printing, Coating and Dyeing</u></b>	OOOO	05/29/2003 (68FR32172)	05/29/2006	Applies to fabric and other textile printing, coating, dyeing, finishing, and slashing (sizing) operations at major HAP sources
<b><u>Ferroalloys Production</u></b>	XXX	05/20/1999 (64FR27450)	05/20/2001	Applies to major sources of HAP that are considered to be a ferroalloy production facility. A ferroalloy is an alloy of iron and one or more other elements, such as chromium, manganese, and/or silicon. Ferroalloys are consumed primarily in iron and steel making where they are used to produce steel and cast iron products with enhanced or special properties.
<b><u>Flexible Polyurethane Foam Fabrication Operation</u></b>	MMMMM	04/14/2003 (68FR18061)	04/14/2004	Applies to major HAP sources that bond pieces of flexible polyurethane foam together or to other substrates using a HAP-based adhesive or flame lamination.
<b><u>Flexible Polyurethane Foam Production</u></b>	III	10/07/1998 (63FR53980)	10/08/2001	Applies to major HAP sources that manufacture flexible polyurethane foam or re-bond (scrap or recycled) foam.
<b><u>Friction Materials Manufacturing</u></b>	QQQQQ	10/18/2002 (67FR64497)	10/18/2005	Applies to major HAP sources that manufacture friction material using a solvent-based process. Friction materials are used to accelerate or decelerate objects (e.g., disc brakes pads, brake lining, brake shoes, clutches and clutch facing).
<b><u>Gasoline Distribution (stage 1)</u></b>	R	12/14/1994 (59FR64303)	12/15/1997	Applies to bulk gasoline terminals and pipeline breakout stations that receive gasoline by pipeline, ship or barge, and have a gasoline throughput of greater than 75,700 liters per day. Only major sources of HAP are subject.
<b><u>General Provisions</u></b>	A	03/16/1994 (59FR12340)	Varies by Individual MACT standard	Applies to all MACT affected sources. The individual MACT requirements may supersede the General Provisions (Subpart A) by being more <u>or</u> less stringent.
<b><u>Hazardous Organic NESHAP (HON)</u></b>	F, G, H, I	04/22/1994 (59FR19402)	04/22/1997	Applies to major HAP sources that produce hazardous organic chemicals. This mainly includes chemicals designated as Synthetic Organic Chemical Manufacturing Industry (SOCMI) chemicals. Please refer to section 63.100 and Tables 1 and 2 for specific applicability.
<b><u>Hazardous Waste Combustion</u></b>	EEE	09/30/1999 (64FR52827)	09/30/2003	Applies to incinerators, cement kilns, and lightweight aggregate kilns that burn hazardous waste as fuel at major and area HAP sources.

<b><u>Hydrochloric Acid Production &amp; Fumed Silica Production</u></b>	NNNNN	04/17/2003 (68FR19075)	04/17/2006	Applies to major HAP sources that produce liquid HCl product of concentration of 30% weight percent or greater during normal operations.
<b><u>Hydrogen Fluoride Production</u></b>	YY (Generic MACT) <sup>3</sup>	06/29/1999 (64FR34853)	06/29/2002	Applies to major sources of HAP that produce hydrogen fluoride. Sources generally are processes engaged in the production and recovery of hydrogen fluoride by reacting calcium fluoride with sulfuric acid.
<b><u>Industrial, Commercial, &amp; Institutional Boilers &amp; Process Heaters</u></b>	DDDDD	09/13/2004 (69FR55218)	09/12/2007	Applies to boilers and process heaters located at major sources of HAP.
<b><u>Industrial Cooling Towers</u></b>	Q	09/08/1994 (59FR46339)	03/08/1995	Applies to industrial cooling towers at major HAP sources that are operated with chromium-based water treatment chemicals. Existing sources must eliminate the use chromium-based water treatment chemicals from cooling towers by March 8, 1995. No new sources can use these chemicals in cooling towers.
<b><u>Integrated Iron and Steel</u></b>	FFFFF	05/27/2003 (68FR27646)	05/22/2006	Applies to major sources of HAP that are considered to be integrated iron and steel manufacturing facilities. An <i>integrated iron and steel manufacturing facility</i> means an establishment engaged in the production of steel from iron ore.
<b><u>Iron &amp; Steel Foundries</u></b>	EEEE	04/22/2004 (69FR21906)	04/23/2007	Applies to major sources of HAP that are considered to be iron and steel foundries. Iron and steel foundries melt scrap, ingot, and other forms of iron and steel and pour the resulting molten metal into molds to produce shaped products.
<b><u>Large Appliances (Surface Coating)</u></b>	NNNN	07/23/2002 (67FR48253)	07/23/2005	Applies to major sources of HAP that surface coat large appliance parts or products (e.g. refrigerators, freezers, water heaters, dishwashers).
Lead Acid Battery Manufacturing		Delisted 06/04/1996 (61FR28197)		
<b><u>Leather Finishing Operations</u></b>	TTTT	02/27/2002 (67FR9156)	02/28/2005	Applies to leather finishing operations at major HAP sources. Leather finishing operations are processes used to adjust and improve the physical and aesthetic characteristics of a leather surface.
Lightweight Aggregate		Delisted 02/12/2002 (67FR6521)		
<b><u>Lime Manufacturing</u></b>	AAAAA	01/05/2004 (69FR915510)	01/05/2007	Applies to major HAP sources that manufacture lime products (calcium oxide, calcium oxide with magnesium oxide, or dead burned dolomite) by calcination of limestone, dolomite, shells or other calcareous substances.
<b><u>Magnetic Tape</u></b>	EE	12/15/1994 (59FR64580)	12/15/1996 or 12/15/1997	Applies to major HAP sources that manufacture magnetic tape used for audio recording, video recording, or any type of information storage. Any coating line for which the production of magnetic tape is 1 percent or less of total production of the line in any 12-month period would not be affected by the rule.
<b><u>Marine Vessel Loading Operations</u></b>	Y	09/19/1995 (60FR48388)	MACT- 09/19/1999 RACT- 09/19/1998	Applies to any operation under which a commodity is bulk loaded onto a marine tank vessel from a terminal, including the loading of multiple marine tank vessels during one loading operation. Major sources of HAP are subject, as are new area sources that meet certain criteria.
<b><u>Mercury Cell Chlor-Alkali Plants (formally Chlorine Production)</u></b>	IIII		12/19/2006	Applies to major and area sources of HAP that are considered to be mercury cell chlor-alkali plants. Mercury cell chlor-alkali plants produce chlorine and caustic using mercury cells. Caustic is used to neutralize acidic compounds.
<b><u>Metal Can (Surface Coating)</u></b>	KKKK		11/13/2006	Applies to major sources of HAP that surface coat metal cans and ends (including decorative tins) and metal crowns and closures.

<b><u>Metal Coils (Surface Coating)</u></b>	SSSS	06/10/2002 (67FR39794)	06/10/2005	Applies to major sources of HAP that surface coat metal coils. A <i>metal coil</i> means a continuous metal strip that is at least 0.15 mm (0.006 in.) thick, which is packed in a roll or coil prior to coating.
<b><u>Metal Furniture (Surface Coating)</u></b>	RRRR	05/23/2003 (68FR28606)	05/23/2006	Applies to major sources of HAP that surface coat metal furniture. <i>Metal furniture</i> means furniture or components of furniture constructed either entirely or partially from metal.
<b><u>Mineral Wool Production</u></b>	DDD	06/01/1999 (64FR29489)	06/01/2002	Applies to major sources of HAP that use cupola and curing ovens to produce mineral wool from natural rock (such as basalt), blast furnace slag or other slag, or a mixture of rocks and slag.
<b><u>Miscellaneous Coating Manufacturing</u></b>	HHHHH	12/11/2003 (68FR69163)	12/11/2006	Applies to major HAP sources that manufacture coatings not covered by another subpart. Coatings are materials such as paint, ink, or adhesive that is to be applied to a substrate. These are typically covered by SIC codes 285 or 289.
<b><u>Miscellaneous Metal Parts &amp; Products (Surface Coating)</u></b>	MMMM		01/02/2007	Applies to major sources of HAP that surface coat miscellaneous metal parts and products not covered by another subpart.
<b><u>Miscellaneous Organic Chemical Production (also known as "MON")</u></b>	FFFF	11/10/2003 (68FR63852)	05/10/2008	Applies to major HAP sources that produce miscellaneous organics chemical not otherwise covered in another subpart. This includes chemicals classified under SIC codes 282, 283, 284, 285, 286, 287, 289, and 386. It also covers quaternary ammonium, ammonium sulfate produced with caprolactam, and hydrazine.
<b><u>Municipal Solid Waste (MSW) Landfills</u></b>	AAAA	01/16/2003 (68FR2227)	01/16/2004	Applies to MSW landfills, including those with bioreactors, which have accepted waste since November 8, 1987. Major sources of HAP are subject, as are some area sources that meet certain design capacity criteria.
<b><u>Natural Gas Transmission and Storage</u></b>	HHH	06/17/1999 (64FR32609)	06/17/2002	Applies to major sources of HAP that transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user.
<b><u>Nutritional Yeast Manufacturing</u></b>	CCCC	05/21/2001 (66FR27876)	05/21/2004	Applies to major HAP sources that make nutritional or bakers yeast. Includes sources that produce yeast for the purpose of becoming a nutritional additive intended for human consumption.
Nylon 6 Production		Delisted 02/12/1998 (63FR7155)		
<b><u>Off-Site Waste Recovery Operations</u></b>	DD	07/01/1996 (61FR34139)	07/01/2000	Applies to major sources of HAP that receive and recycle, reprocess or re-refine HAP containing wastes, used oil, or used solvents that are not produced or generated within the plant site.
<b><u>Oil &amp; Natural Gas Production</u></b>	HH	06/17/1999 (64FR32609)	06/17/2002	Applies to major sources of HAP where hydrocarbon liquids are processed, upgraded, or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category.
<b><u>Organic Liquid Distribution (OLD)</u></b>	EEEE	02/03/2004 (96FR5038)	02/05/2007	Applies to organic liquids distribution (non-gasoline) operations at major sources of HAP emissions. OLD operations include storage tanks, transfer racks, equipment leak components, and transport vehicles associated with the storage and movement of organic liquids.
<b><u>Paper and Other Web Coatings</u></b>	JJJJ	12/04/2002 (67FR72341)	12/04/2005	Applies to major sources of HAP at which web coating lines are operated. <i>Web coating line</i> means any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.
<b><u>Pesticide Active Ingredient Production</u></b>	MMM	06/23/1999 (64FR33549)	12/23/2003	Applies to major HAP sources that produce pesticide active ingredients.

Petroleum Solvent Dry Cleaning		Delisted 01/30/2001 (66FR8220)		
<b><u>Petroleum Refineries</u></b>	CC	08/18/1995 (60FR43244)	08/18/1998	Applies to petroleum refining process units that emit, or have equipment containing or contacting, one or more HAP, and are located at major sources of HAP. Affected sources include miscellaneous process vents, storage vessels, wastewater streams and treatment operations, equipment leaks, gasoline loading racks classified under SIC code 2911, marine vessel loading operations meeting the applicability criteria of subpart Y, and storage vessels and equipment leaks associated with bulk gasoline terminals or pipeline breakout stations classified under SIC code 2911 that are located within a contiguous area and under common control with a refinery.
<b><u>Petroleum Refineries - Catalytic Cracking, Catalytic Reforming &amp; Sulfur Plant Units</u></b>	UUU	04/11/2002 67FR17762	04/11/2005	Applies to facilities that 1) produce transportation fuels, heating fuels, or lubricants, 2) separate petroleum, 3) separate, crack, react, or reform an intermediate petroleum stream, or 4) recover a by-product(s) from the intermediate petroleum stream (e.g., sulfur recovery). Affected sources include catalytic cracking units that regenerate catalyst, catalytic reforming units that regenerate catalyst, sulfur recovery units and the tail gas treatment units serving them, and each bypass line serving the aforementioned sources. Operations located at major sources of HAP are subject.
<b><u>Pharmaceuticals Production</u></b>	GGG	09/21/1998 (63FR50280)	10/21/2002	Applies to major HAP sources that produce pharmaceuticals, pharmaceutical active ingredients, or precursors to pharmaceuticals.
<b><u>Phosphoric Acid/ Phosphate Fertilizers</u></b>	AA BB	06/10/1999 (64FR31358)	06/10/2002	Applies to major HAP sources that produce phosphoric acid and phosphate fertilizer.
<b><u>Plastic Parts &amp; Products (Surface Coating)</u></b>	PPPP	04/19/2004 (69FR20968)	04/16/2007	Applies to major sources of HAP that surface coat plastic parts and products not covered by another subpart.
<b><u>Plywood &amp; Composite Wood Products</u></b>	DDDD	07/30/2004 (69FR45944)	10/01/2007 <sup>4</sup>	Applies to major source of HAPs that produce plywood and other composite wood products by bonding wood materials or agricultural fiber to form a structural panel or other engineered wood product. It also covers lumber kilns and the manufacture of dry veneer at other facilities.
<b><u>Polycarbonates Production</u></b>	YY (Generic MACT) <sup>3</sup>	6/29/1999 (64FR34853)	06/29/2002	Applies to major HAP sources that produce polycarbonates. This includes production of a special class of polyester formed from any dihydroxy compound and any carbonate diester or by ester exchange.
<b><u>Polyether Polyols Production</u></b>	PPP	06/01/1999 (64FR29419)	06/01/2002	Applies to major HAP sources that produce polyether polyols.
<b><u>Polymers &amp; Resins I</u></b>	U	09/05/1996 (61FR4906)	07/31/1997	Applies to major sources of HAP that produce an elastomer product. This includes the following products: Butyl Rubber, Halobutyl Rubber, Epichlorohydrin Elastomer, Ethylene Propylene Rubber, Hypalon <sup>TM</sup> , Neoprene, Nitrile Butadiene Rubber, Nitrile Butadiene Latex, Polybutadiene Rubber/Styrene Butadiene Rubber by Solution, Polysulfide Rubber, Styrene Butadiene Rubber by Emulsion and Styrene Butadiene Latex.
<b><u>Polymers &amp; Resins II</u></b>	W	03/08/1995 (61FR12672)	03/03/1998	Applies to major sources of HAP that produce basic liquid epoxy resins and wet strength resins.
<b><u>Polymers &amp; Resins III</u></b>	OOO	01/20/2000 65FR3275	01/20/2003	Applies to major HAP sources that produce amino and phenolic resins.
<b><u>Polymers &amp; Resins IV</u></b>	JJJ	09/12/1996 (61FR48208)	06/19/2001 08/06/2002 (PET LDAR)	Applies to major HAP sources that produce thermoplastic products, including ABS, ASA/AMSAN, EPS, MABS, MBS, nitrile resin, PET, polystyrene, and SAN.

<b><u>Polyvinyl Chloride &amp; Copolymers Production</u></b>	J	07/10/2002 (67FR45885)	07/10/2005	Applies to major sources of HAP that produce polyvinyl chloride. This includes plants where vinyl chloride, alone or in combination with other materials, is polymerized.
<b><u>Portland Cement Manufacturing</u></b>	LLL	06/14/1999 (64FR31898)	06/14/2002	Applies to facilities that manufacture Portland Cement. Major and area sources of HAP are subject. Excludes Portland Cement kilns that burn hazardous waste as fuel that are subject to Subpart EEE.
<b><u>Primary Aluminum Production</u></b>	LL	10/07/1997 (62FR52384)	10/07/1999	Applies to major sources of HAP that have a new pitch storage tank and new or existing potline, paste production plant, or anode bake furnace associated with primary aluminum production.
<b><u>Primary Copper Smelting</u></b>	QQQ	06/12/2002 (67FR40478)	06/12/2005	Applies to major sources of HAP that are considered to be primary copper smelters. <i>Primary copper smelter</i> means any installation or any intermediate process engaged in the production of copper from copper sulfide ore concentrates through the use of pyrometallurgical techniques.
<b><u>Primary Magnesium Refining</u></b>	TTTTT	10/10/2003 (68FR58615)	10/10/2006	Applies to major sources of HAP that are considered to be primary magnesium refineries. Primary magnesium refineries produce magnesium metal from the waters of the Great Salt Lake.
<b><u>Primary Lead Smelting</u></b>	TTT	06/04/1999 (64FR30194)	06/04/2002	Applies to major sources of HAP that are considered to be primary lead smelters. <i>Primary lead smelter</i> means any facility engaged in the production of lead metal from lead sulfide ore concentrates through the use of pyrometallurgical techniques.
<b><u>Printing/Publishing</u></b>	KK	05/30/1996 (61FR27132)	05/30/1999	Applies to major HAP sources. Covers publication rotogravure products, packaging rotogravure, and wide-web flexography facilities.
<b><u>Publicly Owned Treatment Works (POTW's)</u></b>	VVV	10/26/1999 (64FR57572)	10/26/2002	Applies to non-industrial, publicly owned treatment works (POTW), or the portions of POTW used by industry to treat their wastewater to meet other Clean Air Act (CAA) standards. Affects major sources of HAP and certain area sources.
<b><u>Pulp &amp; Paper (non-combust) MACT I</u></b>	S	04/15/1998 (63FR18504)	04/15/2001	Applies to major HAP sources that produce pulp, paper, and paperboard. MACT I focuses on controlling emissions from Kraft, soda, sulfite, and semichemical pulping units.
<b><u>Pulp &amp; Paper (combustion) MACT II</u></b>	MM	01/12/2001 66FR3180	03/13/2004	Applies to major HAP sources of each Kraft, soda, sulfite and stand-alone semichemical mill. MACT II focuses on controlling emissions from the pulping chemical recovery combustion units. It covers various evaporator recovery furnaces, smelt dissolving tanks, lime kilns and various combustion units at Kraft or soda pulp mills, sulfite mills, and semichemical pulp mills.
<b><u>Pulp &amp; Paper (non-chem) MACT III</u></b>	S	04/15/1998 (63FR18504)	04/16/2001	Applies to major HAP sources that produce pulp, paper, and paperboard. MACT III focuses on controlling emissions from pulping production areas using mechanical, secondary and non-wood pulping, and papermaking systems at all mills.

<b><u>Reciprocating Internal Combustion Engines (RICE)</u></b>	ZZZZ	06/15/2004 (69FR33474)	06/15/2007	Applies to stationary RICE above 500 horsepower, such as generators that supply emergency power, located at major sources of HAP.
<b><u>Refractory Products Manufacturing</u></b>	SSSSS	04/16/2003 (68FR18729)	04/16/2004	Applies to major sources of HAP that are considered to be refractory products manufacturing facilities. Refractory products are heat-resistant materials that provide the linings for high-temperature furnaces, reactors, and other processing units where extremes of temperature, corrosion, and abrasion would destroy other materials.
<b><u>Reinforced Plastic Composites Production</u></b>	WWWW	04/21/2003 (68FR19375)	04/21/2006	Applies to major sources of HAP that are considered to be reinforced plastic composites production facilities. Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites.
<b><u>Secondary Aluminum</u></b>	RRR	03/23/2000 (65FR15629)	03/24/2003	Applies to each secondary aluminum production facility. For major sources of HAPs, the affected source includes: (1) Each new and existing aluminum scrap shredder; (2) Each new and existing thermal chip dryer; (3) Each new and existing scrap dryer/delacquering kiln/decoating kiln; (4) Each new and existing group 2 furnace; (5) Each new and existing sweat furnace; (6) Each new and existing dross-only furnace; (7) Each new and existing rotary dross cooler; and (8) Each new and existing secondary aluminum processing unit. For area sources, the affected source includes: (1) Each new and existing thermal chip dryer; (2) Each new and existing scrap dryer/delacquering kiln/decoating kiln; (3) Each new and existing sweat furnace; (4) Each new and existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge.
<b><u>Secondary Lead Smelters</u></b>	X	06/23/1995 (60FR32587)	06/23/1997	Applies to major and area sources of HAP that are considered to be secondary lead smelters. Secondary lead smelters produce lead from scrap and provide the primary means for recycling lead-acid automotive batteries.
<b><u>Semiconductor Manufacturing</u></b>	BBBB	05/22/2003 (68FR27913)	05/22/2006	Applies to major sources of HAP that are considered to be semiconductor manufacturing facilities. <i>Semiconductor manufacturing means</i> the collection of semiconductor manufacturing process units used to manufacture p-type and n-type semiconductors or active solid state devices from a wafer substrate, including processing from crystal growth through wafer fabrication, and testing and assembly.
<b><u>Shipbuilding &amp; Ship Repair</u></b>	II	12/15/1995 (60FR64330)	12/16/1996	Applies to major sources of HAP that conduct shipbuilding and ship repair operations.
Sewage Sludge Incinerators		Delisted 02/12/2002 (67FR6521)		
<b><u>Spandex Production</u></b>	YY (Generic MACT) <sup>3</sup>	07/12/2002 (67FR46257)	07/12/2005	Applies to major HAP sources that produce and spin the synthetic fiber spandex, which is made up of polyurethane polymer.
<b><u>Site Remediation</u></b>	GGGGG	10/08/2003 (68FR58171)	10/08/2006	Applies to the site remediation of HAP containing material. Remediation site must be collocated with a facility that is a major source of HAP emissions and subject to another MACT standard.
<b><u>Steel Pickling-HCL Process</u></b>	CCC	06/22/1999 (64FR33202)	06/22/2001	Applies to major sources of HAP that are considered to be steel pickling facilities. Pickling is a process in which an acid solution is used to remove oxide scale from steel strip, rod, wire, tubing, and discreet shapes.

<b><u>Taconite Iron Ore Processing</u></b>	RRRRR	10/30/2003 (68FR61867)	10/30/2006	Applies to the process of separating and concentrating iron ore from taconite, a low-grade iron ore, to produce taconite pellets. Major sources of HAP are subject.
<b><u>Tetrahydrobenzaldehyde Manufacture</u></b> (part of HON))	F	05/12/1998 (63FR26078)	05/12/2001	Applies to major source of HAP that produce tetrahydrobenzaldehyde. This is part of the HON, so other conditions are also required to determine applicability. Please see HON for further details.
<b><u>Tire (Rubber) Production</u></b>	XXXX	07/09/2002 (67FR45587)	07/09/2005	Applies to major HAP sources that process cements and solvents in the tire manufacturing process. Specific categories of operations covered by this MACT are tire production operations, puncture sealant applications, and rubber processing applications.
Uranium Hexafluoride Production		Delisted 02/12/2002 (67FR6521)		
<b><u>Vegetable Oil Production (Solvent Extraction)</u></b>	GGGG	04/12/2001 (66FR19006)	04/12/2004	Applies to major sources of HAP that use hexane to extract oil from regulated vegetable seeds.
<b><u>Wet-Formed Fiberglass Mat Production</u></b>	HHHH	04/11/2002 67FR17824	04/11/2005	Applies to majors source of HAP that produce a substrate (wet formed fiberglass mat) to be used in the manufacturer of asphalt roofing products
<b><u>Wood Building Products (Surface Coating)</u></b>	QQQQ	05/28/2003 (68FR31746)	05/28/2006	Applies to major sources of HAP that surface coat wood building products that contain more than 50 percent by weight wood or wood fiber.
<b><u>Wood Furniture</u></b>	JJ	12/07/1995 (60FR62930)	11/21/1997	Applies to major source of HAP that manufactures wood furniture or wood furniture components ( <i>example: drawer sides, cabinet doors, and laminated tops</i> ). Incidental wood furniture manufacturers (majors sources that use > 100 gallons per month of regulated material) must comply with purchase and usage records requirements only
Wood Treatment MACT		Delisted 06/04/1996 (61FR28197)		
<b><u>Wool Fiberglass Manufacturing</u></b>	NNN	06/14/1999 (64FR31695)	06/14/2001	Applies to major HAP sources that manufacture wool fiberglass using such processes as glass-melting furnaces, rotary spins lines, and flame attenuation lines.

THIS ABOVE LISTING DOES NOT INCLUDE THE *FEDERAL REGISTER* DATES OR CITATIONS FOR AMENDMENTS OR CORRECTIONS MADE TO THESE STANDARDS SINCE THEY WERE FIRST PROMULGATED.

<sup>1</sup> Compliance dates listed above reflect the date most existing sources must comply with at least part of the MACT standard. See standard for other compliance dates. Newly constructed and reconstructed sources must comply upon start-up.

<sup>2</sup> These summaries are intended solely as guidance, and should not be relied upon to make final applicability determinations. Please review the actual applicability language and definitions of the individual subparts to determine applicability.

<sup>3</sup> “Generic MACT” Standards are consolidated standards designed to cover multiple sources with similar emission types and MACT control requirements. Generic MACT standards are often established when there are less than five facilities (nationwide) in a source category. Other MACT standards may reference a Generic MACT.

<sup>4</sup> Court decision to vacate the extended compliance date of 10/01/2008. Compliance date for existing sources is now 10/01/2007. As of October 10, 2007, a mandate had not been issued.

## OTHER GENERIC MACT CATEGORIES

Last Updated January 2003

**These standards only apply if another subpart of 40 CFR Part 60 (NSPS), 61 (NESHAP), or 63 (NESHAP/MACT) references the use of one or more of these subparts.**

NATIONAL EMISSION STANDARD	40 CFR 63 Subpart	Final Fed Register Date & Citation
<u>Tanks – Level 1</u>	OO	07/01/96 (61FR34184)
<u>Containers</u>	PP	07/01/96 (61FR34186)
<u>Surface Impoundments</u>	QQ	07/01/96 (61FR34190)
<u>Individual Drain Systems</u>	RR	07/01/96 (61FR34193)
<u>Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process</u>	SS	06/29/99 (64FR34866)
<u>Equipment Leaks – Level 1</u>	TT	06/29/99 (64FR34886)
<u>Equipment Leaks –Level 2</u>	UU	06/29/99 (64FR34899)
<u>Oil-Water Separators and Organic-Water Separators</u>	VV	07/01/96 (61FR34195)
<u>Storage Vessels (Tanks) – Level 2</u>	WW	06/29/99 (64FR34918)
<u>Heat Exchange Systems &amp; Waste Operations at Ethylene Production Units</u>	XX	07/12/2002 (67FR46258)

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# **MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT) UPDATE**

**Last Updated March 18, 2008**

**Prepared by  
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**<http://www.scdhec.gov/environment/baq/mact.aspx>**

**<http://www.epa.gov/ttn/atw>**