

# Air/Compliance News Update

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## IN THIS ISSUE

BART DETERMINATIONS UNDER  
THE REGIONAL HAZE RULE.....Page 1

MERCURY - NEW REGULATIONS  
ON THE HORIZON.....Page 1

EPA PROPOSES MACT FOR  
REINFORCED PLASTIC  
COMPOSITES PRODUCTION.....Page 2

INTEGRATED IRON AND STEEL  
MANUFACTURING NESHAP  
PROPOSED .....Page 2

CONVENTION ON PERSISTENT  
ORGANIC POLLUTANTS .....Page 3

OPERATIONAL RESTRICTIONS  
IN TITLE V – BEWARE .....Page 3

KYOTO PROTOCOL.....Page 3

PERMITTING FOR STORAGE  
TANKS .....Page 4

NSR POLICY UNDER ATTACK....Page 4

NESHAP PROPOSED FOR COKE  
OVENS: PUSHING, QUENCHING  
AND BATTERY STACKS.....Page 4

NEW RACT RULES ON THE  
HORIZON .....Page 5

## BART DETERMINATIONS UNDER THE REGIONAL HAZE RULE

Sections 169 A and B of the Clean Air Act (CAA) require EPA to issue regulations to improve visibility in 156 scenic areas across the U.S. In June 1999, EPA issued the regional haze rule (40 CFR Part 51) requiring states to establish goals for improving visibility in these 156 Class I areas and to develop long term strategies for reducing these visibility-impairing pollutants, which include NO<sub>x</sub>, SO<sub>2</sub>, VOC, fine particulate (PM<sub>10</sub> and PM<sub>2.5</sub>), and ammonia. Because fine particles can potentially travel hundreds of miles, all 50 States, including those that do not have Class I areas, must participate in this program.



The regional haze regulations require certain types of sources to install best available retrofit technology (BART). To implement BART, the EPA proposed to amend the regional haze rule on June 22, 2001 to provide guidelines for states in determining BART requirements. The BART requirements will apply to older plants built between 1962 and 1977, including utility and industrial boilers and large industrial plants that are listed in the 26 categories, such as petroleum refineries, lime plants, and coke batteries. These plants must have a potential to emit greater than 250 tons/year of a subject pollutant.

In identifying BART, the states are required to consider the costs of compliance, the energy impacts of compliance, the remaining useful life of the source, any existing control technology in use at the facility, and the degree of visibility improvement that would result from the implementation of BART. EPA requires the States to identify the facilities that will have to install BART controls by 2003 to 2005, but implementation plans that will contain enforceable measures for reducing regional haze are not due until 2008.



## MERCURY - NEW REGULATIONS ON THE HORIZON

Coal-fired electric utilities will soon be evaluating control equipment options to reduce emissions of mercury. EPA reported that 464 coal-fired electric power plants emitted 43 tons of mercury in 1999. Coal-fired power plants, municipal waste combustors (MWCs), hazardous waste incinerators (HWIs) and medical waste incinerators (MWIs) are the largest contributors to mercury emissions in the U.S.

Most of the mercury that enters the environment enters from air emissions, but it can also enter through wastewater releases or from waste disposal, especially mercury batteries. Mercury tends to bioaccumulate in fish and animal tissue in its most dangerous form, methylmercury. Mercury poses a risk to wildlife and humans, but especially young children. The National Academy of Sciences found that children exposed to mercury in the womb are at high risk to develop neurological problems. Rules have already been enacted for HWIs, MWCs and MWIs. EPA plans to propose new regulations for coal-fired electric utilities by 2003 and adopt final rules by 2004. At the present time, several companies are developing innovative technologies to reduce emissions at power plants.

Visit: [www.epa.gov/ttn/oarpg/t3/fact\\_sheets/fs\\_util.pdf](http://www.epa.gov/ttn/oarpg/t3/fact_sheets/fs_util.pdf)





## EPA PROPOSES MACT FOR REINFORCED PLASTIC COMPOSITES PRODUCTION

This July, EPA posted to their web site a proposed MACT rule to reduce emissions of toxic air pollutants from reinforced plastic composite (RPC) production facilities. RPC facilities produce a wide variety of reinforced plastic products, such as fiberglass bath tubs and showers, automobile and recreational vehicle parts, storage tanks, and engine and tool covers. The primary air toxic associated with these operations is styrene.

The proposed rule was published in the Federal Register on August 2, 2001. EPA will accept comments on this proposal for 60 days after the date of publication. The final rule is expected to be published in mid-2002. Assuming the final rule is published at that time, final compliance with the rule would be required no later than mid-2005.

The rule will affect all "major" RPC sources of air toxics, which is defined as the potential to emit 10 or more tons per year of any one air toxic, or 25 or more tons per year of any combination of air toxics. However, larger RPC sources will be treated differently from smaller emitters. A "large" business (over 500 employees in all commonly-owned businesses) with emissions over 100 tons per year, and "small" businesses (less than 500 employees) with emissions over 250 tons per year, will be required to install capture and control systems that reduce emissions by 95%. RPC sources that do not exceed these thresholds, will have to incorporate various pollution prevention techniques to reduce emissions. The amount of reduction required for the smaller emitters varies, depending on the type of operation.

Some pollution prevention techniques include: use of raw materials containing low amounts of air toxics; vapor-suppressed resins; non-atomized resin applications; and covering open resin baths and tanks.



## INTEGRATED IRON AND STEEL MANUFACTURING NESHAP PROPOSED [66 FR 36835 - JULY 13, 2001]

EPA has proposed MACT Requirements for New and Existing Integrated Iron and Steel Manufacturing Facilities.

EPA has identified the following HAPs from iron and steel manufacturing facilities: manganese, lead, other metals, trace organics including POM (including dioxin/furans), benzene, toluene, xylene, and carbon disulfide.

Existing sources will have to comply with the rule two years after publication of the final regulation and new sources must comply with the rule upon startup.

These will be codified at 40 CFR 63 Subpart FFFF and are summarized below:

Affected Sources	New	Existing
<b>Sinter Plant</b>		
Windbox Exhaust	PM: 0.3 lbs/ton sinter product (EPA is also considering a concentration limit of 0.03 gr/dscf)	PM: 0.3 lbs/ton sinter product (EPA is also considering a concentration limit of 0.03 gr/dscf)
Discharge End Control Device	PM: 0.01 gr/dscf Building Opacity: 10% (6-minute average)	PM: 0.02 gr/dscf Building Opacity: 20% (6-minute average)
Cooler Stack	PM: 0.01 gr/dscf	PM: 0.03 gr/dscf
<b>Blast Furnace</b>		
Casthouse Control Device	0.009 gr/dscf	0.009 gr/dscf
Casthouse	15% opacity (6-minute average)	20% opacity (6-minute average)
<b>BOP Furnaces</b>		
Closed Hood System – oxygen blowing only (no re-blows)	PM: 0.024 gr/dscf	PM: 0.024 gr/dscf
Open Hood System – entire steel production cycle (from furnace charge to 3 minutes after slag is removed)	PM: 0.019 gr/dscf	PM: 0.019 gr/dscf
BOP Furnace Control Device – secondary emissions	PM: 0.0052 gr/dscf	PM: 0.01 gr/dscf
Ancillary Operations – control device (baghouse)	PM: 0.007 gr/dscf	PM: 0.007 gr/dscf
Roof Monitor (Fugitives) – Bottom-blown BOP	Opacity: 10% (6-minute avg.) One 6-minute avg. <20% allowed during each steel production cycle.	Opacity: 20% (3-minute average)
Roof Monitor (Fugitives) – Top-blown BOP	Opacity: 10% (3-minute avg.) One 3-minute avg. <20% allowed during each steel production cycle.	Opacity: 20% (3-minute average)

EPA will accept comments on this proposed regulation until October 11, 2001.



## CONVENTION ON PERSISTENT ORGANIC POLLUTANTS

EPA Administrator Christine Todd Whitman signed the Convention on Persistent Organic Pollutants (POPs) in May on behalf of the United States. Over 90 other countries signed the deal, lead in part by the United States.

POPs are highly toxic and highly persistent chemicals. The United States has donated \$22 million to assist in efforts to help reduce or eliminate their usage and has received praise from the United Nations for its efforts.

These chemicals include DDT, PCBs and dioxins. All are highly toxic and, more disturbingly, bioaccumulative – which means that they are present in greater quantities in plants and wildlife further up the food chain.

## OPERATIONAL RESTRICTIONS IN TITLE V - BEWARE

Every year, facilities are required to submit compliance certifications certifying their compliance status with applicable requirements contained in their Title V permit and listing any deviations or excursions that may have occurred during the compliance period. This certification is very important for it is the cornerstone for enforcement action by the EPA or local regulatory authorities. Therefore, it is of utmost importance to know what monitoring, recordkeeping, and reporting requirements are contained in your Title V permit and to negotiate requirements that are lawful and have reliable compliance determination methods.

Title V was not intended to impose new requirements, but to address existing federally-enforceable requirements. With respect to monitoring, States are not supposed to impose more frequent monitoring than is contained in an applicable requirement, unless that requirement specifies no periodic testing, or requires only a one-time test. However, the EPA took the position that frequent monitoring must be imposed to assure compliance with the terms and conditions of the permit and subsequently published the periodic monitoring guidance to aid the States in setting these operational restrictions. The DC Circuit vacated this guidance in April 2000 because the EPA failed to conduct a rulemaking but the procedures are still being implemented by many state agencies.

The problem with the operational restrictions is that they tend to be more stringent than EPA's Compliance Assurance Monitoring (CAM) rule. (CAM applies only to sources that would be major by themselves in the absence of a control device.) However, operational restrictions can apply to the smallest of sources. Furthermore, CAM is not intended to provide a direct measure of compliance with emission limits.

For example, a facility may operate a number of dust collectors with particulate emission limitations. A state or local agency

could require pressure drop monitoring of a dust collector to ensure operation within a specified range and more compliance with the limitation. If the pressure drop goes outside that range, CAM requires that the unit be returned to normal operation and that an excursion has occurred, but not a violation. Many States consider this a violation of the permit, although no emission limitation has been exceeded. This "deviation" must be reported as a violation against the facility in the compliance certifications and can be used as credible evidence of a violation.

To avoid this exact scenario, do not agree to the conversion of monitoring requirements into operational restrictions. Always consult the underlying applicable requirement. If the monitored parameter goes outside the range, request the permit to state that it will be restored to normal operation as soon as practicable and if returned to the normal operating range, the unit is in compliance and that a violation has not occurred.

## KYOTO PROTOCOL



In July, environmental ministers from around the world took the second step towards approving the 1997 Kyoto Protocol. Meetings in Bonn, Germany were capped by a compromise of major industrial powers (Japan, Russia, Canada, and the European Union) that saw them settle most of their differences on the plan to cut emissions of so-called greenhouse gasses to lower levels.

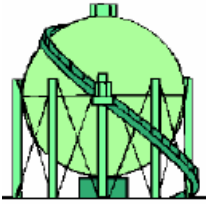
The deal was also marked by the absence of President George W. Bush who refused to sign or even give preliminary approval to any global emissions reduction plan citing that mandatory caps on emissions could affect the United States' economy as well as those of developing nations. President Bush's refusal to be part of the Kyoto Protocol was met with criticism from others who were willing to sign and support the treaty including the European Union and environmental groups such as Greenpeace.

The agreed upon plan would reduce emissions to 5.2 percent below 1990 by the year 2012. It also included a compromise where less harsh compliance mechanisms would be in place than those the European Union had requested, as well as allowing carbon-absorbing forests to be used towards targets for cutting pollution.

The preliminary approval of the Kyoto Protocol comes on the heels of 3 reports issued this year by scientists claiming that global warming and the effects of global warming are occurring more rapidly than previously suspected.

None of the 180 countries present voiced dissent over the deal, although the United States refused to verify it. Canada and Japan, both previously allies of the United States against the deal, did not object to it during ratification.

## PERMITTING FOR STORAGE TANKS



Clients often ask about permitting requirements for storage tanks as they change service, repair, or replace their existing tanks. There are many requirements that should be evaluated for applicability in all cases.

In most states, storage tanks (for other than ammonia, natural gas, or propane) are required to obtain air construction permits. Tanks exempt from acquiring construction permits are still included in emission inventories and other permit applications.

Tanks with capacities of less than 10,000 gallons that do not handle HAPs are generally exempt from construction permitting unless they are subject to other regulations. Some agencies will exempt tanks over 10,000 gallons from permitting, if they have low throughputs. Other agencies may require even smaller tanks to get permits if their vapor pressure is high. Tanks larger than 10,000 gallons may also be subject to the New Source Performance Standards, 40 CFR 60 Subpart K, Ka, or Kb. The applicability of a particular subpart will depend on the vapor pressure of the stored material and the construction date.

Facilities should be vigilant in reviewing whether the applicability of NSPS and state regulations change when tank contents change. They should also consider whether capital improvements to a tank make it subject to new source requirements. In general, if more than 50% of the capital cost of a new tank has been spent to refurbish a tank, the source may be subject to the NSPS and Best Available Control Technology (BACT) standards.

Tanks may also be subject to the Maximum Achievable Control Technology (MACT) requirements. MACT standards may apply to tanks associated with processes subject to 40 CFR Part 63 (NESHAP) or to tanks in new or modified processes which have HAP emissions over the NESHAP thresholds of 10 TPY of any single HAP or 25 TPY of a combination of HAPs.

In addition to the air programs, tanks are often subject to non-air state registration, design, operation, closure, recordkeeping, inspection, and security requirements. For example, in Pennsylvania, tank owners/operators are subject to the Storage Tank and Spill Prevention Act (Act 32) and its amendments. These include small ASTs (greater than 250 and less than 21,000 gallons), large ASTs (greater than 21,000 gallons), and USTs. If the total capacity of all ASTs is greater than 21,000 gallons, owners/operators must develop and follow a Spill Prevention Response Plan.

In summary, any change to an existing tank or a new tank installation should be reviewed thoroughly beforehand to determine the applicability of permitting under federal and state programs. At a minimum, it is good engineering practice to keep detailed records for each tank including dimensions,

drawings, control equipment specifications, heating capabilities, pressure relief valve specifications, and historical records of content, storage temperature, and the date of installation. Records should also be kept for upgrade and refurbishment expenditures.

## NSR POLICY UNDER ATTACK

On June 22, 2001, the EPA released the "NSR 90-Day Review and Background Paper" for public comment. The paper was written in response to recommendations in the May 2001 report from the National Energy Policy Development Group, headed by Vice President Dick Cheney. In the report, it was recommended that the EPA review the New Source Review (NSR) regulations to "determine the impact of those regulations on investment in new utility and refinery generation capacity, energy efficiency, and environmental protection."

NSR, which was incorporated into the CAA in 1977 as a measure to protect air quality, requires major new sources, and existing sources that undergo a major modification, to install the most modern control technology. For sources in non-attainment areas, the permitting process is called non-attainment NSR and the control technology must achieve the Lowest Achievable Emission Rate (LAER). For attainment areas, the permitting process is Prevention of Significant Deterioration (PSD) and the control technology must represent the BACT. Because non-attainment areas have poorer air quality, LAER is generally more stringent than BACT.

For the most part, determining NSR applicability for new sources is straightforward. However, for existing sources that undergo modifications, the applicability determination to the program is much more complex. In fact, the purpose of the requested NSR review from the Vice President stems from EPA's drastic new theory of the definition of modification as detailed in the NSR Reform Rulemaking (63 FR 39860, July 24, 1998) and subsequent EPA policy.

Hopefully this NSR review process will help fix the many flaws of the existing NSR program, including the misunderstandings of the exemption for "routine maintenance, repair, or replacements," and mend the controversy surrounding the evaluation of net emission increases.



## NESHAP PROPOSED FOR COKE OVENS: PUSHING, QUENCHING AND BATTERY STACKS

On July 3, 2001, EPA proposed a NESHAP standard for coke oven pushing and quenching operations and battery stacks (66 FR 35325). New and existing coke oven operators will be required to meet either an opacity limitation (Option 1) or work practice standards (Option 2) for pushing operations. In Option 1, the daily average opacity of fugitive pushing emissions will be limited to 20% for a short

and 25% for a tall battery. The daily average opacity would be based on four consecutive pushes per battery per day. The average opacity per push would be based on the average of the six highest consecutive observations made at 15-second intervals. In Option 2, work practice standards would be implemented based on an opacity trigger. Different standards for pushing operations have been proposed for coke ovens with horizontal flues. Particulate matter emission standards have also been proposed for control devices that capture pushing emissions.

Work practice standards have been proposed for quenching operations. Plants would be required to equip each quench tower with baffles to cover at least 95% of the cross-sectional area, clean the baffles daily, and perform monthly inspections. In addition, the plant would be required to use clean water as make-up water.

Continuous opacity monitoring systems (COMS) would be required to be installed on each battery stack to monitor stack opacity. A daily average opacity limit of 15% is proposed for a normal coking cycle and 20% for a battery on extended coking.

All plants would be required to prepare and implement a written startup, shutdown and malfunction plan in accordance with 40 CFR Part 63, Subpart A requirements. EPA is accepting comments on the proposed rule until October 1, 2001.



## NEW RACT RULES ON THE HORIZON

The Ozone Transport Commission (OTC) issued a memorandum of understanding on March 6, 2001 that contains a Model Rule for States in the Ozone Transport Region. The OTC rule was developed as part of a regional effort to achieve attainment with the 1-hour and 8-hour ozone standards. OTC states include VA, PA, MD, NY, NJ, CT, NH, VT, Washington DC, RI, and ME.

The model rule includes standards for industrial boilers, stationary combustion turbines and reciprocating engines, emergency generators, load shaving units and cement kilns.

The following are a few of the recommended measures:

### For Boilers over 5MMBtu/hr and less than 50MMBtu/hr

- Conduct Annual PTC 4.1 Efficiency Tests and Adjust Boiler
- Measure NO<sub>x</sub>, CO, O<sub>2</sub> and Opacity After Adjustment
- Maintain Logs of performance

### Industrial Boilers over 50MMBtu/hr and less than 100 MMBtu/hr

- Natural Gas NO<sub>x</sub> Limit: 0.1 lb/MMBtu or 50% Reduction

- Coal or Oil NO<sub>x</sub> Limit: 0.3 lb/MMBtu or 50% Reduction
- Annual Test or Install CEM

### Industrial Boilers over 100 MMBtu/hr and less than 250 MMBtu/hr

- Natural Gas NO<sub>x</sub> Limit: 0.1 lb/MMBtu or 50% Reduction
- Coal or Oil NO<sub>x</sub> Limit: 0.2 lb/MMBtu or 50% Reduction
- Annual Test or Install CEM

### Reciprocating Engines > 200 Hp

- Spark Ignited Rich Burn Engines: 1.5 grams NO<sub>x</sub> per Brake Horsepower Hour(Bhp-hr)
- Spark Ignited Lean Burn Engines less than 2,000 HP: 1.5 grams NO<sub>x</sub> per Bhp-hr or 80% control
- Spark Ignited Lean Burn Engines greater than 2,000 HP: 1.5 grams NO<sub>x</sub> per Bhp-hr or 90% control
- For a Diesel Engine: 2.3 grams NO<sub>x</sub> per Bhp-hr
- Testing or CEMS to Determine Compliance

### Cement Kilns >(10 -22 ton/hr, Type Dependent)

- Low NO<sub>x</sub> Burners Installed and Used when Kiln Operates
- Mid Kiln or Secondary Combustion Required
- Emissions at 30% of Uncontrolled Baseline Levels

Additional limits are suggested for Combustion Turbines over 25MMBtu/hr, load shaving units and emergency generators. New Jersey has already proposed rules based on these recommendations, and other states should soon follow.

Visit: [www.sso.org/otc](http://www.sso.org/otc)

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