

# Background on National Emission Standards for Industrial, Commercial, and Institutional Boiler and Process Heaters; and Commercial / Industrial Solid Waste Incineration (CISWI) Units

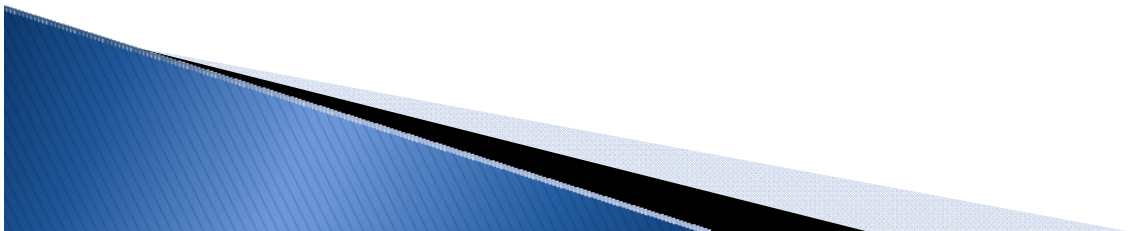
Laura McKelvey  
U.S. Environmental Protection Agency

June 9, 2010



# Purpose of the Webinar

- ▶ To provide a summary of the proposed rules
- ▶ Answer clarifying questions on the proposals
- ▶ Highlight key issues we are particularly requesting comment on
- ▶ Highlight how to comment
- ▶ NOTE: this is not a forum to take comment



# Quick Summary

- ▶ EPA was directed by court order to propose rules by April 29, 2010 and take final action by December 16, 2010
  - Requires new standards for both new and existing sources of toxic air pollutants
  - Legal requirements for boiler and waste combustor standards differ and may result in different pollution control requirements
  - Whether a given facility is regulated as a boiler or a waste combustor depends on a final decision on the nonhazardous solid waste definition
- ▶ We evaluated information from a large number of facilities to determine the bases for new standards
- ▶ We evaluated and reported on the combined impacts of the 4 rules on Environmental Justice

# A Brief History

- ▶ Clean Air Act (CAA) created 2 different requirements for boilers (sec. 112) and CISWI units (sec. 129)
- ▶ When EPA set standards for waste combustors, it excluded units that burn solid waste for energy recovery, treating them instead as boilers
- ▶ In June 2007, the U.S. Court of Appeals rejected EPA's standards, citing CAA language that "any facility burning any solid waste" is to be regulated as a waste combustor, not a boiler
- ▶ EPA is now on a court-ordered schedule to adopt final rules by December 16, 2010

# Similarities Between the Boiler and CISWI Rules

- ▶ Both are national rules
- ▶ Both require limits based on “maximum achievable control technology” (MACT) with later evaluations of remaining risk and stricter standards if needed
- ▶ New source standards reflect what is achieved by the best controlled similar source
- ▶ Existing source standards reflect what is achieved by the average of the best 12% of existing sources

# Differences Between the Boiler and CISWI Rules

- ▶ Boilers (sec. 112)
  - Major sources (10 tons of any one toxic/25 tons of all toxics annually)
    - Standards must be set for all emitted toxic air pollutants
  - Area sources
    - Smaller sources may be regulated based on less stringent “generally achievable control technology” (GACT)
    - Exception for certain pollutants (e.g., mercury, polycyclic organic matter)
- ▶ CISWI units (sec. 129)
  - Standards must be set for 9 specific pollutants, not all of which are “air toxics”
  - Additional siting and operator training requirements
  - No provision authorizing GACT for smaller sources
- ▶ Since the source populations and current levels of control achieved by sources within each category differ, resulting standards may also differ

# What's the Difference Between the Two Types of Standards?

- ▶ Court decisions have narrowed the differences
  - Sec. 112 standards must reflect what is achieved in practice, not what is achievable by all sources; “no-control” rules not permitted
  - “Best performing” means for whatever reason
    - Control technology only one factor
  - No exemptions for startups, shutdowns, or malfunctions

# What has Happened Since the Court Decision?

- ▶ EPA requested information from ~ 3,000 boilers and 500 suspected CISWI units, with emissions testing at 200 boilers and 50 CISWI units
- ▶ When contacted, some boilers have elected to cease burning secondary materials to avoid being classified as solid waste combustors
- ▶ We evaluated the data to determine level of control for proposed standards



# How did We Evaluate Environmental Justice Impacts?

- ▶ Joint effort to evaluate the demographic distribution of the population around the sources impacted by the boiler MACT, CISWI rule, and definition of solid waste
- ▶ For Boilers/CISWI units:
  - Locate sources
  - Identify demographic characteristics near sources to determine the potential benefit or impact
  - Maps are available at [www.epa.gov/airquality/combustion/actions.html](http://www.epa.gov/airquality/combustion/actions.html)

# Industrial Boilers / CISWI Analysis – Results

POPULATIONS WITHIN THREE-MILE PROXIMITY TO MAJOR SOURCE BOILERS AND CISWI UNITS									
Overall population	White	Minorities	African American	Native America	Other and multiracial	Hispanic or Latino	Below the poverty line	Under age 18	Age 65 and Over
POPULATION WITHIN 3 MILES OF MAJOR SOURCE BOILERS (13,434 UNITS)									
36,868,952	24,828,553	12,040,399	7,296,123	207,441	4,536,835	4,682,861	5,997,709	9,735,998	4,614,672
	67%	33%	20%	1%	12%	13%	16%	26%	13%
POPULATION WITHIN 3 MILES OF CISWI INCINERATORS (176 UNITS)									
2,095,561	1,480,539	615,022	346,191	21,128	247,703	273,943	295,197	569,708	260,929
	71%	29%	17%	1%	12%	13%	14%	27%	12%
OVERALL NATIONAL POPULATION									
285,339,128	214,539,706	70,799,422	35,043,873	2,489,515	33,265,937	39,083,760	37,161,950	77,245,364	35,491,274
	75%	25%	12%	1%	12%	14%	13%	27%	12%

# For Further Information:

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# Identification of Non-Hazardous Secondary Materials that are Solid Wastes

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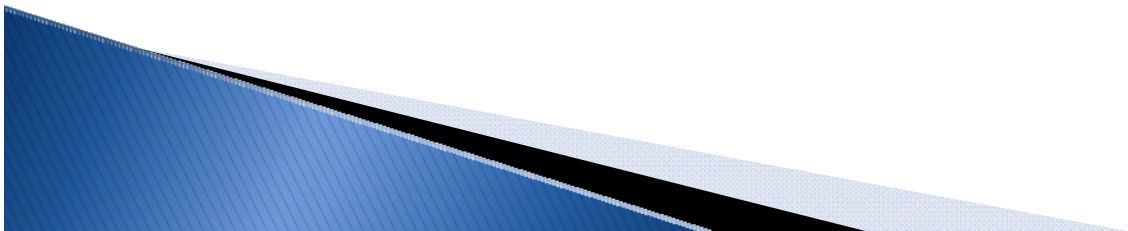
June 9, 2010

# TOPICS

- ▶ Overview
  - What does the proposal do
  - Why is the proposal important
- ▶ Proposed and Alternative Approaches
- ▶ Environmental Justice
- ▶ Issues to be Considered
- ▶ Schedule

# OVERVIEW OF NON-HAZARDOUS MATERIALS THAT ARE SOLID WASTE (NHSM) PROPOSAL

- ▶ Clarifies which secondary materials are solid wastes when burned in combustion units
  - “Secondary” refers to materials that are not the primary product of a manufacturing or commercial process
  - Includes consumer and industrial materials that are no longer used for their original purpose
  - Ex: Scrap tires, off-spec used oil, wood, coal refuse, and construction & demolition debris

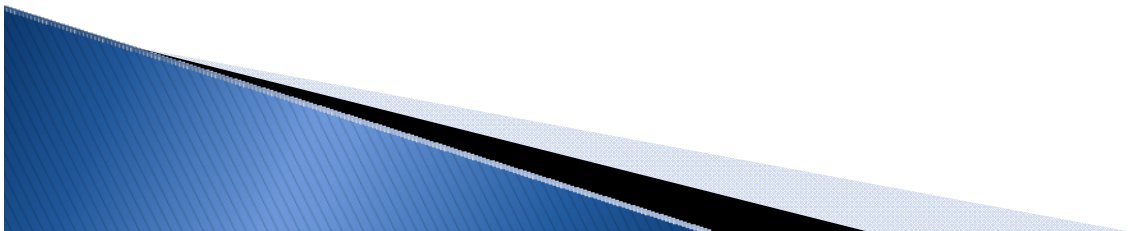


# OVERVIEW OF EPA'S PROPOSAL

- ▶ Determines whether air requirements under Clean Act section 112 or Clean Act section 129 apply to those units
- ▶ There are approximately 1.38 million boilers and process heaters nationwide, which include gas-fired boilers
- ▶ Approximately 196,000 of those boilers and process heaters are anticipated to be regulated under CAA 112 (as either major or area sources) or CAA 129
  - Subset of this universe thought to be burning secondary materials

## WHY IS THIS RULE IMPORTANT ?

- ▶ Units that burn SOLID WASTE would be subject to requirements under CAA section 129
- ▶ Units that burn materials that are NOT A SOLID WASTE would be subject to requirements under CAA section 112

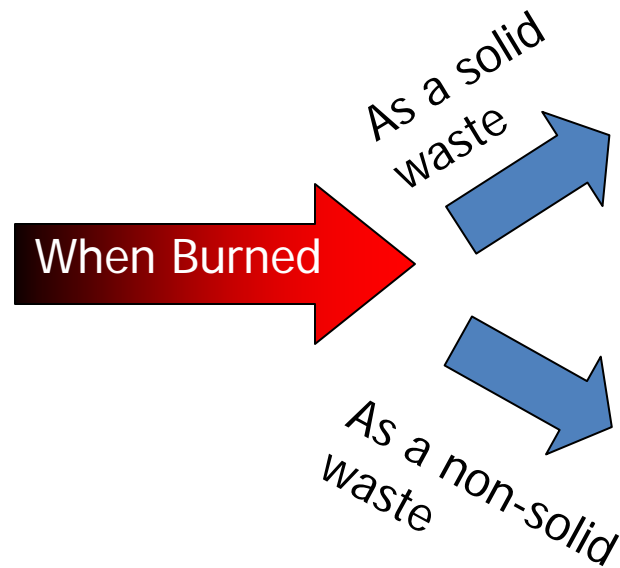




## SECONDARY MATERIALS

Like...

Biomass  
Construction debris  
Scrap tires  
Scrap plastics  
Spent solvents  
Used tires  
Coal Refuse  
Foundry Sand  
Sewage Sludge  
Wood manufacturing material



The Combustion Unit  
is regulated under...

**CAA 129**

**CAA 112**

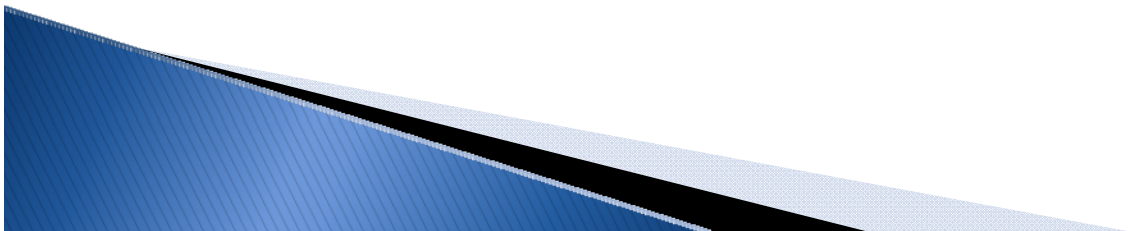
**FYI:** "Secondary materials" are the byproducts of a manufacturing or commercial process. They also include both consumer and industrial materials that are no longer used for their original purpose.

# INITIAL STEPS THE AGENCY TOOK TO DECIDE WHETHER MATERIALS ARE A SOLID WASTE

- ▶ EPA published Advanced Notice of Proposed Rulemaking (ANPRM) on January 2, 2009
- ▶ Identified 2 key factors for solid waste determination
  - Whether secondary material has been discarded
  - If discarded, has it been sufficiently processed to produce a legitimate fuel
- ▶ Discussed concept that secondary material must be legitimately used to be considered a non-waste

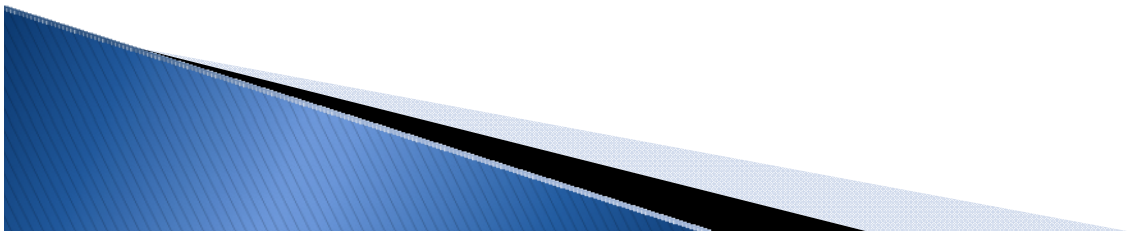
## PROPOSED APPROACH

- ▶ In general, non-hazardous secondary materials are solid wastes when burned in combustion units
  - Examples include whole tires, off-spec used oil, contaminated construction and demolition material
- ▶ Non-hazardous secondary materials that are not a solid waste when combusted:
  - Traditional fuels
    - e.g. fuel oil, clean biomass, coal
  - Materials which remain in the control of the generator and meet legitimacy criteria

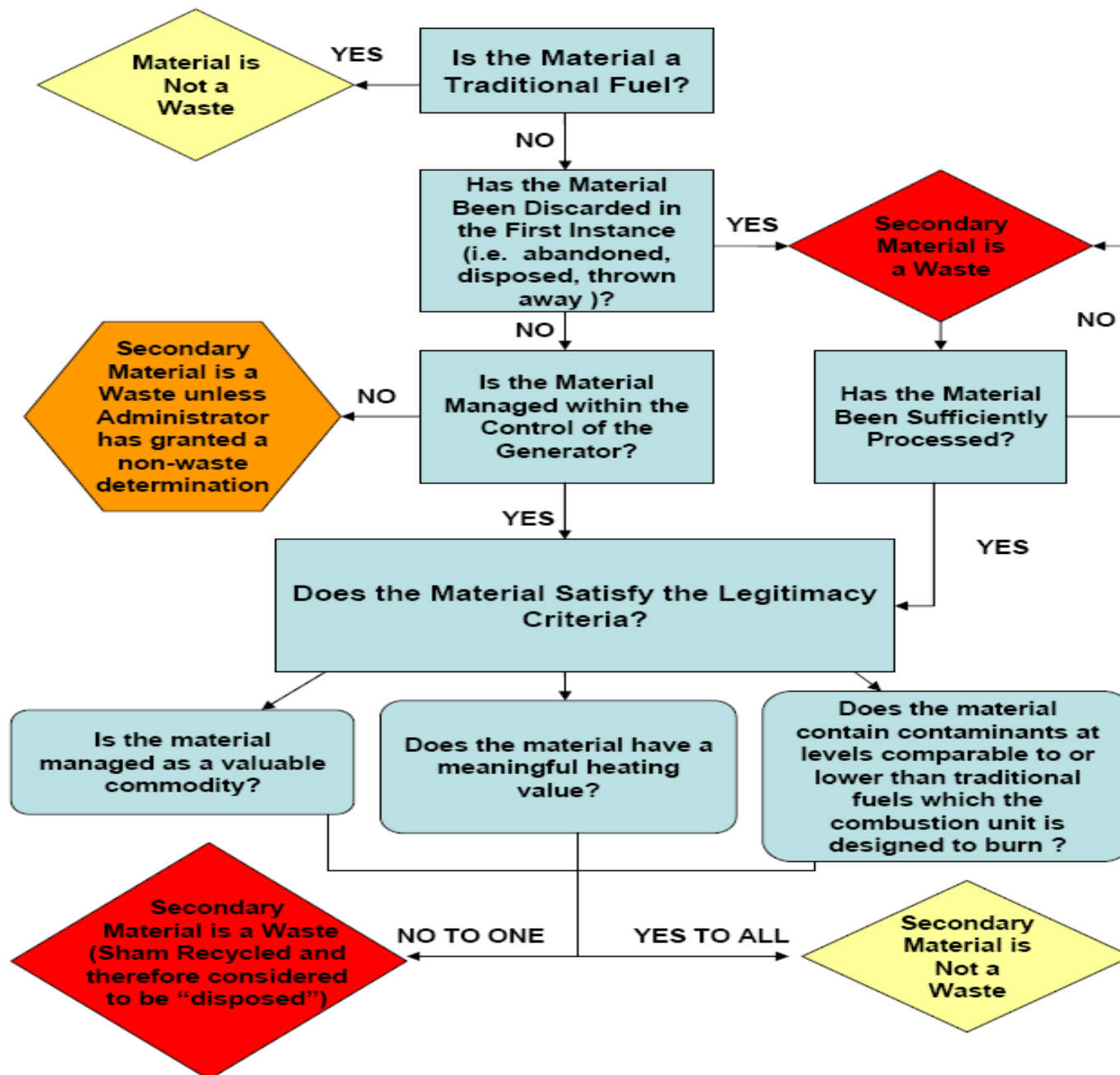


# PROPOSED APPROACH

- ▶ Non-hazardous secondary materials that are not a solid waste when combusted (continued):
  - Materials used as an ingredient in a combustion unit and that meet legitimacy criteria
  - Materials and ingredients that have been discarded but are subsequently processed into a new legitimate product fuel
    - e.g. tire derived fuel with metal removed
  - Materials for which non-waste petition is granted

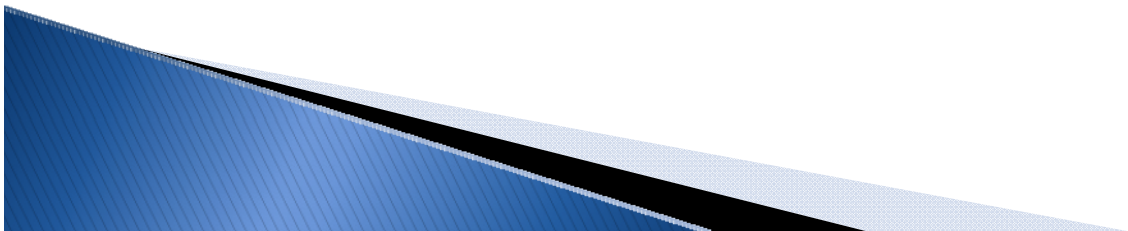


**Flow Chart for Determining Whether Non-Hazardous Materials Used as Fuel In Combustion Units are Solid Waste**



# ALTERNATIVE APPROACH

- ▶ All non-hazardous secondary materials and ingredients combusted off-site are a solid waste
- ▶ Materials combusted within control of the generator and traditional fuels are a non-waste
- ▶ Major difference
  - Discarded materials and ingredients processed into new products are still considered solid waste
  - Materials such as pulp and paper sludge, wood manufacturing residuals, tire-derived fuel and on-spec used oil managed outside the control of the generator would be solid wastes

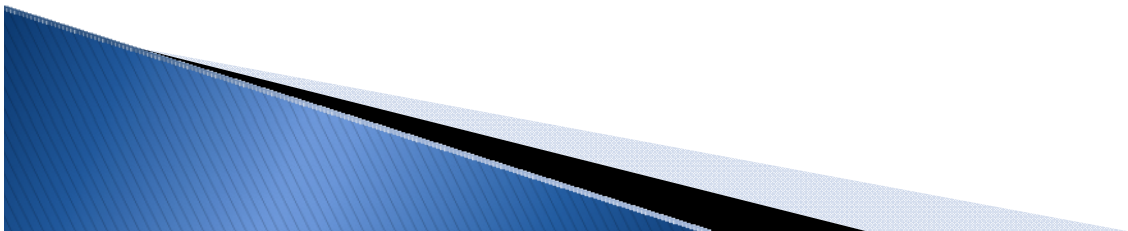


# ENVIRONMENTAL JUSTICE

- ▶ Evaluating question of whether proposal will or will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations
- ▶ We have completed preliminary demographic analyses in conjunction with the Boiler MACT and CISWI proposed rules
- ▶ Since the rulemaking may result in secondary materials being diverted from combustion units, we have also completed demographic analyses on the disposal and processing facilities that may receive these wastes:
  - For populations living near these facilities, results suggest that percentages of low-income and minority populations are slightly higher than national average
  - Also evaluated are the potential slowdown in abatement of scrap tire stockpiles, potential for increased accumulation of secondary materials in stockpiles, and potential for dumping of used oil

## ISSUES TO BE CONSIDERED FOR FINAL RULE

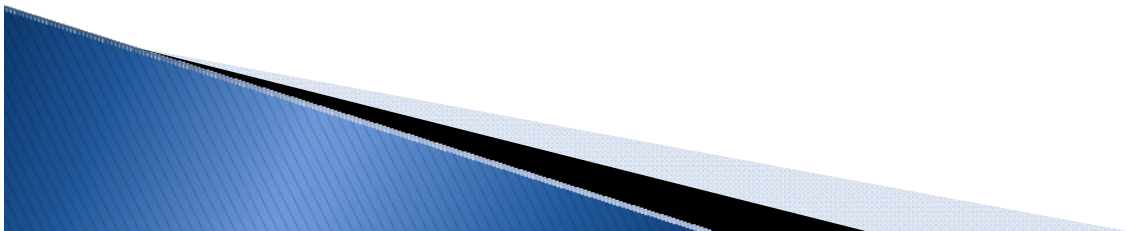
- ▶ Impact the rule will have on states' ability to implement their own solid waste management programs
- ▶ Whether the rule could preferentially promote combustion of secondary materials over traditional recycling activities
- ▶ Whether the rule will have environmental justice impacts





## TIMING AND NEXT STEPS

- ▶ Public comment period ends August 3, 2010
- ▶ Sign final rule by December 16, 2010
- ▶ For more information  
[www.epa.gov/epawaste/nonhaz/define/index.htm](http://www.epa.gov/epawaste/nonhaz/define/index.htm)
  - Website includes Fact Sheets, Qs and As, Material Characterization Papers, ANPRM, and a link to our docket (to comment on the rule)



# Overview of Boiler MACT and Boiler Area Source Rule

Brian Shrager,  
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U.S. Environmental Protection Agency

June 9, 2010

# STATUS

- ▶ Rulemakings
  - National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters (Boiler MACT – Maximum Achievable Control Technology)
  - NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers
  
- ▶ Schedule
  - Proposal signed on April 29, 2010, rule published on June 4, 2010
  - Final – December 16, 2010 (Court-ordered)

# Background – What Sources Do The Boiler Rules Cover?

## Boiler Maximum Achievable Control Technology (MACT)

- Cover about 13,555 boilers and process heaters at about 1,600 major source facilities
  - 11,500 of the major source units are gas-fired
- Major source facilities are mostly industrial but include universities, municipalities, and military installations
  - About 9% of major source facilities are small entities

## Boiler Area Source Rule

- Cover about 183,000 boilers at an estimated 92,000 area source facilities
  - There are 1.3 million gas-fired boilers located at area sources that are not included in source category
- Area source facilities are mostly commercial (e.g., hotels, office buildings, restaurants) and institutional (e.g., schools, hospitals, prisons) but include industrial sources
- About 85% of area sources are estimated to be small entities

# BOILER MACT

# Boiler MACT – Proposed Subcategories

- ▶ **Eleven subcategories based on design type**
  - Pulverized coal units
  - Coal-fired stokers
  - Coal-fired fluidized bed combustion units
  - Biomass-fired stokers
  - Biomass-fired fluidized bed combustion units
  - Biomass-fired Dutch ovens/suspension burners
  - Biomass-fired fuel cells
  - Liquid fuel-fired units
  - Gas 1 (natural gas/refinery gas)
  - Gas 2 (other gases)
  - Metal process furnaces (natural gas-fired)

# Boiler MACT – Proposed Standards

## ▶ Existing units

- Proposed limits for nine of the eleven subcategories for:
  - Particulate Matter (PM) – as surrogate for non-mercury metals
  - Mercury (Hg)
  - Hydrogen Chloride (HCl) – as surrogate for acid gases
  - Carbon Monoxide (CO) – as surrogate for non-dioxin organic Hazardous Air Pollutant (HAP)
  - Dioxin/Furan
- Technology basis
  - Baghouse (metals/Hg)
  - Carbon injection (Hg/dioxins)
  - Scrubber (HCl)
  - Good combustion practices (organic HAP)
- Emissions limits only applicable to units with heat input capacities 10 million Btu/hour or greater
- Work practice standard (annual tune-up) proposed under section 112(h) for:
  - Units with heat input capacities less than 10 million Btu/hour
  - Units in Gas 1 and Metal Process Furnaces subcategories
- Beyond-the-floor standard proposed for
  - All major source facilities – to conduct an energy assessment

# Boiler MACT –Proposed Standards

## ▶ New units

- Proposed numeric emissions limits for nine of the eleven subcategories for:
  - PM (as surrogate for non-mercury metals)
  - Mercury
  - HCl (as surrogate for acid gases)
  - CO (as surrogate for non-dioxin organic HAP)
  - Dioxin/Furan
- Expected Technology
  - Baghouse (metals/Hg)
  - Carbon injection (Hg/dioxins)
  - Scrubber (HCl)
  - Good combustion practices (organic HAP)
- Emissions limits applicable to all units, regardless of size
  - More stringent than limits for existing sources
- No work practice standards or beyond-the-floor standards proposed



# Boiler MACT – Proposed Testing and Monitoring Requirements

## ▶ Testing

- Initial compliance tests (PM, HCl, Mercury, THC, and Dioxins)
- Annual performance tests
- Annual tune-up for units less than 10 million Btu/hour in size and units in Gas 1 and Metal Process Furnaces subcategories
- Allows emission averaging among existing units in same subcategory

## ▶ Monitoring

- CO Continuous Emissions Monitors (CEMS) for units with heat input capacity of 100 million Btu/hour or greater
- PM CEMS for units combusting coal, biomass, or residual oil and having a heat input capacity of 250 million Btu/hour or greater
- Process parameters (opacity, pressure drop, sorbent injection rate, fuel, etc.)

## ▶ Continuous Compliance

- Demonstrated by maintaining operating limits (process parameters)
- Demonstrated by maintaining CEMS values (30-day average) below emission limits

# Boiler MACT – Impacts

## ▶ Cost Impacts

- Total capital investment (TCI) = \$9.5 billion
- Total annualized cost (TAC) = \$2.9 billion
  - Testing/monitoring (TAC) = \$140 million
  - Energy Assessment (Audit) = \$26 million (one-time cost)

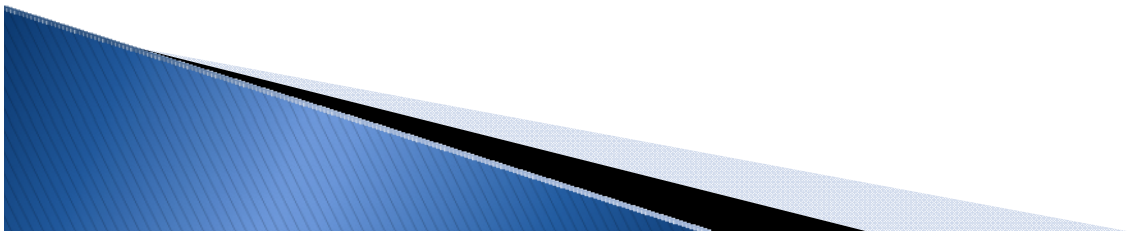
## ▶ Emission Reductions (tons/year)

	<u>Existing</u>	<u>New</u>
HCl =	37,000	9
Mercury =	8	0.001
Metals =	3,200	0.6
PM =	50,000	130
SO <sub>2</sub> =	340,000	500
VOC =	1,800	4

# BOILER AREA SOURCE RULE

# Boiler Area Source Rule – Proposed Subcategories

- ▶ **Three subcategories based on design type**
  - Coal-fired units
    - 3,700 units
  - Biomass-fired units
    - 11,000 units
  - Liquid fuel-fired units
    - 168,000 units



# Boiler Area Source Rule – Proposed Standards

## ▶ Existing units

- Coal-fired boilers
  - Proposed emission limits for:
    - Mercury – based on MACT
    - CO (as surrogate for Polycyclic Organic Matter (POM) and other urban organic HAP) – based on MACT
  - Technology basis – baghouse (metals/Hg)/good combustion practices (organic HAP)
- Biomass-fired boilers and oil-fired boilers
  - Proposed emission limits only for CO (as surrogate for POM) – based on MACT
- Emissions limits only applicable to units with heat input capacities 10 million Btu/hour or greater
- Work practice standard/management practice (biennial tune-up) proposed under section 112(h) for units with heat input capacities less than 10 million Btu/hour
- Energy assessment proposed for area source facilities having boilers with heat input 10 million Btu/hour or greater as a beyond-the-floor standard.

# Boiler Area Source Rule – Proposed Standards

## ▶ New units

- Proposed emission limits
  - For coal-fired boilers
    - PM (as surrogate for urban metals)
    - Mercury (only for coal-fired boilers)
    - CO (as surrogate for POM and other urban organic HAP)
  - For biomass-fired boilers and oil-fired boilers
    - PM (as surrogate for urban metals)
    - CO (as surrogate for POM and other urban organic HAP)
- Technology basis – baghouse (metals/Hg)/good combustion practices (organic HAP)
- Emissions limits applicable to all units, regardless of size
- No work practice standards proposed
- No beyond-the-floor standard proposed

# Boiler Area Source Rule – Proposed Testing and Monitoring Requirements

## ▶ Testing

- Initial compliance tests (PM, mercury, and CO)
- Annual performance tests
- Biennial tune-up for boilers less than 10 million Btu/hour in size

## ▶ Monitoring

- Process parameters (opacity, pressure drop, sorbent injection rate, fuel, etc.)
- CO CEMS for units with heat input capacity of 100 million Btu/hour or greater

## ▶ Continuous Compliance

- Demonstrated by maintaining operating limits (process parameters)
  - Based on averages set during compliance test

# Boiler Area Source Rule – Impacts

## ▶ Cost Impacts

- Total capital investment (TCI) = \$2.5 billion
  - Existing units = \$1.8 billion
  - New units (6,779 estimated) = \$0.7 billion
- Total annualized cost (TAC) = \$1.0 billion
  - Existing units = \$0.7 billion
  - New units = \$0.3 billion
  - Testing/monitoring TAC = \$290 million
  - Energy Assessment (Audit) = \$52 million

## ▶ Emission Reductions (tons/year)

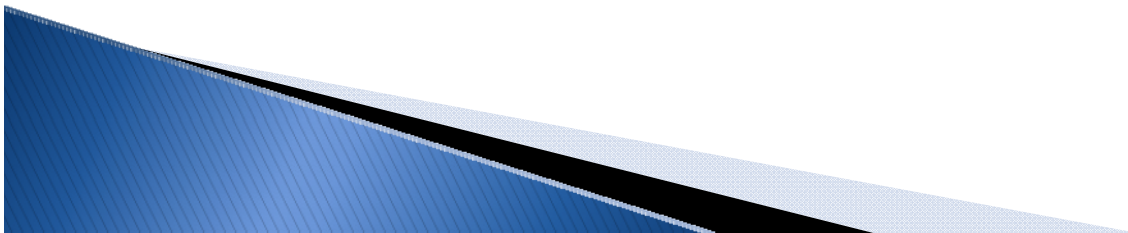
	<u>Existing</u>	<u>New</u>
Mercury =	0.63	0.10
Metals =	210	40
PM =	6,300	1,300
SO <sub>2</sub> =	1,400	150
VOC =	890	290
HCl =	120	8



# Economic Analysis of Area Source Rule

- Social Costs = \$0.5 billion
  - Consumer surplus loss of \$0.3 billion
  - Domestic producer surplus loss of \$0.3 billion
  - Other countries surplus gain \$0.1 billion
  - Fuel savings and other costs not included in market model net cost of \$0.1 billion
- Price and Quantity Changes
  - Average National prices for industrial sectors less than 0.01%
  - Domestic production may fall by less than 0.01%
- Employment Changes
  - Near term job losses 1,000
  - Long-term effects range between 1,000 job losses to 3,000 job gains
- Small Business
  - Small Business Advocacy Review (SBAR) Panel
- Monetized Health Benefits
  - \$1.0 to \$2.4 billion (3% discount)
  - \$0.9 to \$2.2 billion (7% discount rate)
- All Estimates in 2008\$

# Appendix–Emission Limit Tables



## Emission Limits for Existing Major Source Boilers and Process Heaters, lb/MMBtu

Subcategory	PM	HCl	Hg	CO (ppm @3% O <sub>2</sub> )	D/F (TEQ)(ng/dscm)
Coal Stoker	0.02	0.02	0.000003	50	0.003
Coal Fluidized Bed	0.02	0.02	0.000003	30	0.002
Pulverized Coal	0.02	0.02	0.000003	90	0.004
Biomass Stoker	0.02	0.006	0.0000009	560	0.004
Biomass Fluidized Bed	0.02	0.006	0.0000009	250	0.02
Biomass Suspension Burner/Dutch Oven	0.02	0.006	0.0000009	1010	0.03
Biomass Fuel Cells	0.02	0.006	0.0000009	270	0.02
Liquid	0.004	0.0009	0.000004	1	0.002
Gas (Other Process Gases)	0.05	0.000003	0.0000002	1	0.009

## Emission Limits for New Major Source Boilers and Process Heaters, lb/MMBtu

Subcategory	PM	HCl	Hg	CO (ppm @3% O <sub>2</sub> )	D/F (TEQ)(ng/dscm)
Coal Stoker	0.001	0.00006	0.000002	7	0.003
Coal Fluidized Bed	0.001	0.00006	0.000002	30	0.00003
Pulverized Coal	0.001	0.00006	0.000002	90	0.002
Biomass Stoker	0.008	0.004	0.0000002	560	0.00005
Biomass Fluidized Bed	0.008	0.004	0.0000002	40	0.007
Biomass Suspension Burner/Dutch Oven	0.008	0.004	0.0000002	1010	0.03
Biomass Fuel Cells	0.008	0.004	0.0000002	270	0.0005
Liquid	0.002	0.0004	0.0000003	1	0.002
Gas (Other Process Gases)	0.003	0.000003	0.0000002	1	0.009

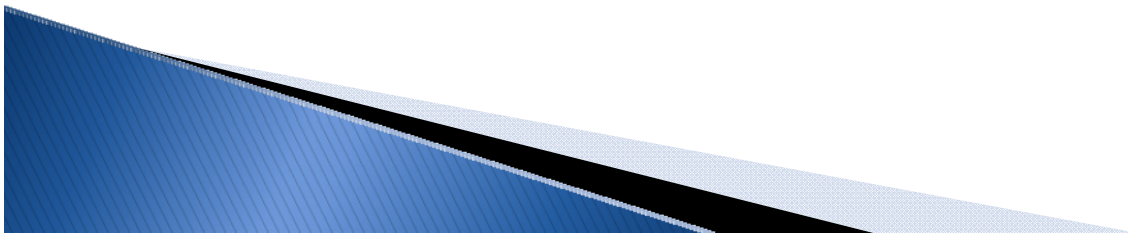
## Emission Limits for Area Source Boilers, lb/MMBtu

Source	Subcategory	PM	Hg	CO, ppm
New Boiler	Coal	0.03	3.0E-06	310 (@ 7% O <sub>2</sub> )
	Biomass	0.03		100 (@ 7% O <sub>2</sub> )
	Oil	0.03		1 (@ 3% O <sub>2</sub> )
Existing Boiler	Coal		3.0E-06	310 (@ 7% O <sub>2</sub> )
	Biomass			160 (@ 7% O <sub>2</sub> )
	Oil			2 (@ 3% O <sub>2</sub> )

# Overview of Commercial and Industrial Solid Waste Incineration Rule

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June 9, 2010



# Background – What Sources Will This Rule Cover?



- ▶ Under the Clean Air Act, if a unit burns any solid waste, it is an incinerator
  - The definition of solid waste defined under The Resource Conservation and Recovery Act (RCRA) – concurrent rule making for definition of nonhazardous solid waste
  
- Any unit that burns solid waste at a commercial or industrial facility is subject to CISWI rule
  - Will cover approximately 176 incinerator units (includes all size sources)

# CISWI – Proposed Subcategories

- ▶ Five subcategories based on design type
  - Traditional incineration units
  - Energy recovery units
  - Waste burning kilns
  - Burn-off ovens
  - Small, remote incineration units



# Proposed CISWI Standards

- ▶ Proposing limits for 9 pollutants under each subcategory
  - Cadmium (Cd), Carbon Monoxide (CO), Hydrogen Chloride (HCl), Mercury (Hg), Lead (Pb), Particulate Matter (PM), Sulfur Dioxide (SO<sub>2</sub>), Nitrogen Oxides (Nox), Dioxin/Furans (D/F)
- ▶ Maximum Achievable Control Technology (MACT) Floors
  - For existing sources: Based on average emission limitation achieved by the best performing 12% of existing sources
  - For new sources: Based on the best controlled similar source
- ▶ No work practice standards
- ▶ Technology basis – baghouses (PM, Cd, Pb, Hg); carbon injection (Hg, Dioxin); scrubber (HCl, SO<sub>2</sub>); selective non-catalytic reduction (NOx); afterburners (CO)

# Baghouses



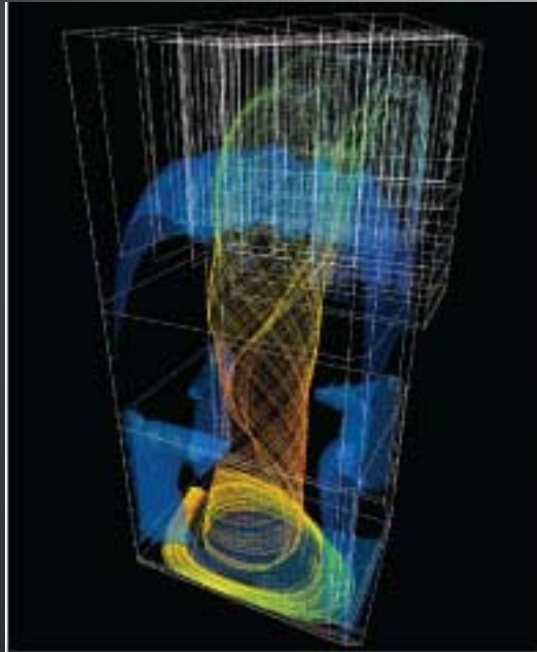
# Activated Carbon Injection



# Scrubbers



# SNCR



# Afterburners



# CISWI – Proposed Testing and Monitoring Requirements

- ▶ Testing
  - Initial and annual performance tests
  - Reduced testing incentives for good performance
  - Method 22 for ash handling fugitive emissions
- ▶ Monitoring
  - Process parameter monitoring based performance test results for most CISWI units
    - Continuous Emissions Monitors (CEMS) allowed as options
  - Mandatory Continuous Monitoring System (CMS)
    - CO CEMS required for all new subcategories
    - CO CEMS and PM CEMS for Energy Recovery Units (ERUs) > 250 mmBtu/hour
    - For kilns, Hg CEMS
    - Continuous Opacity Monitors (COMS) for units without wet scrubbers
  - Alternative for Sorbent traps when performance specs promulgated for Hg and D/F
  - Process parameters (opacity, pressure drop, sorbent injection rate, fuel, etc.)
- ▶ Continuous Compliance
  - Mercury based on monthly averages
  - CEMS based on daily averages
  - Parameters based on 3-hour rolling averages
  - Continuous Opacity Monitors (COMS) based on 6-minute averages
  - Annual inspections for all control devices

# Continuous Emissions Monitor





# CISWI Impacts

- Primary Approach

Number of units	176
Total annual costs	\$216 million
Total emissions reductions	29,770 tons per yr (tpy)
Cd - 5.4 tpy	
CO - 23,610 tpy	
HCl - 525 tpy	
Pb - 5.9 tpy	
Hg - 0.13 tpy	
NO <sub>x</sub> - 1,260 tpy	
PM/PM <sub>2.5</sub> - 1,720/660 tpy	
SO <sub>2</sub> - 2,640 tpy	
Dioxin/furans - 0.0002 tpy	

# CISWI Proposal – Alternative Approach

- ▶ Office of Solid Waste and Emergency Response (OSWER) taking comment on an alternative approach for defining solid waste
- ▶ CISWI proposal presents emission limits based on alternative approach
  - Results in 390 units moving from boilers to incinerators
- ▶ Alternative approach doubles the cost of the CISWI proposed approach – \$480M Total Annualized Cost (TAC)
  - Provides greater emission reductions compared to the proposed approach nationwide due to larger affected source population but less protective locally, due to less stringent limits at the source level

# CISWI Impacts

- Alternative Approach

Number of units	582
Total annual costs	\$480 million
Total emissions reductions	148,330 tons per yr (tpy)
Cd - 4.2 tpy	
CO - 128,120 tpy	
HCl - 395 tpy	
Pb - 3.4 tpy	
Hg - 1.2 tpy	
NOx - 341 tpy	
PM/PM <sub>2.5</sub> - 19,280/3,321 tpy	
SO <sub>2</sub> - 184 tpy	
Dioxin/furans - 0.0003 tpy	

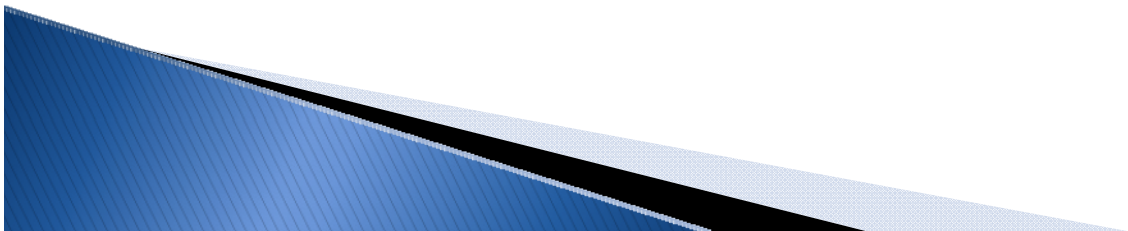
# How to Participate in the Rulemaking Process

Laura McKelvey  
U.S. Environmental Protection Agency

June 9, 2010

# What's the Schedule for the Rulemaking?

- ▶ Proposal – April 29, 2010 (court-ordered)
- ▶ Publication – June 4, 2010
- ▶ Public Hearings – June 15 and June 22, 2010
- ▶ Comment Period – until August 3, 2010
- ▶ Final – December 16, 2010 (court-ordered)



# How Do I Comment on the Rule?

- ▶ Regulations.gov makes it easy to submit comments on these rules.
  - Non-Hazardous Waste Identification Rule – enter ID (EPA-HQ-RCRA-2008-0329)
  - Major Industrial Boiler Rule Proposal – enter ID (EPA-HQ-OAR-2002-0058)
  - Area Industrial Boiler Rule Proposal – enter ID (EPA-HQ-OAR-2006-0790)
  - Commercial Industrial Solid Waste Incinerator (CISWI) Rule Proposal – enter ID (EPA-HQ-OAR-2003-0119)

# How Do I Comment via Fax?

- ▶ Fax Number - 202-566-9744
- ▶ Non-Hazardous Waste Identification Rule - (EPA-HQ-RCRA-2008-0329)
- ▶ Major Industrial Boiler Rule Proposal - (EPA-HQ-OAR-2002-0058)
- ▶ Area Industrial Boiler Rule Proposal - (EPA-HQ-OAR-2006-0790)
- ▶ CISWI Rule Proposal - (EPA-HQ-OAR-2003-0119)

# How do I Comment via Email?

- ▶ For CISWI and the boiler rules:
  - [www.epa.gov/oar/docket.html](http://www.epa.gov/oar/docket.html)
  - [A-and-r-docket@epa.gov](mailto:A-and-r-docket@epa.gov)
- ▶ For definition of solid waste
  - [www.epa.gov/epawaste/nonhaz/define/index.htm](http://www.epa.gov/epawaste/nonhaz/define/index.htm)
- ▶ Please identify the appropriate docket number
  - Non-Hazardous Waste Identification Rule – enter ID (EPA-HQ-RCRA-2008-0329)
  - Major Industrial Boiler Rule Proposal – enter ID (EPA-HQ-OAR-2002-0058)
  - Area Industrial Boiler Rule Proposal – enter ID (EPA-HQ-OAR-2006-0790)
  - CISWI Rule Proposal – enter ID (EPA-HQ-OAR-2003-0119)



# How do I Comment via Mail?

- ▶ Proposed Rulemaking – Identification of Non-Hazardous Secondary Materials that are Solid Waste
  - Environmental Protection Agency,  
Mail code: 2822T, 1200 Pennsylvania Ave., NW.,  
Washington, DC 20460. (Please include a total of 2  
copies).
- ▶ Please identify the appropriate docket  
number

# How do I Comment in Person

- ▶ You can hand deliver 2 copies of your comments to:  
(specify the name of the rule) EPA/DC, EPA West, Room 3334, 1301 Constitution Ave., N.W., Washington, DC 20460.  
Attention Docket ID No. (e.g., EPA-HQ-RCRA-2008-0329).
  - Note: Deliveries are only accepted during the Docket's normal hours of operation and special arrangements should be made for deliveries of boxed information.
- ▶ Participate in one of three Public Hearings
  - Arlington, VA (June 15)
  - Houston, TX (June 22)
  - Los Angeles, CA (June 22)

# How Do I Learn More About These Rules?

- ▶ Website

- [www.epa.gov/airquality/combustion/actions.html](http://www.epa.gov/airquality/combustion/actions.html)
- [www.epa.gov/wastes/nonhaz/definition.htm](http://www.epa.gov/wastes/nonhaz/definition.htm)

- ▶ Conference call

- July 21, 2010 (1:00 pm to 3:00 pm)

- ▶ For other questions please call Laura McKelvey at (919) 541-5497