American Forest & Paper Association

AMERICAN WOOD COUNCIL

Boiler MACT-NHSM Issues

November 9, 2011

Overview

- Major issue for forest product manufacturers
  - $7 Billion in capital to meet March rules
  - 87,000 jobs at risk due to potential paper mill closures
  - Severe impacts on wood product mills as well
- Non-Hazardous Secondary Material (NHSM)
  - Roadblocks for biomass residuals and other common fuels
- Boiler MACT – major issues
  - Achievable limits – CO, dioxin, and new sources
  - Boiler testing for CO, PM subcategories, and time to comply

NHSM: Perverse Outcomes

- Preamble identifies many materials as likely to be fuels, HOWEVER
- Rule language requires meeting "legitimacy criteria"
  - contaminant level must be comparable to "traditional fuel" - coal, wood, etc.
  - Ignores historical use of these alternative fuels
- Many biomass residuals will flunk test - turning boilers into "Incinerators" (3X cost)
  - Resinated wood, wastewater and paper process residuals become solid wastes
  - No health concerns – very small quantities and well controlled under MACT
- Many/Most facilities will stop burning, landfill materials and buy fossil fuels
  - Millions of tons filling our landfills
  - $660 million/year just for forest products – some mills won't survive
- Failure to fix puts MACT floor analysis in jeopardy … again.

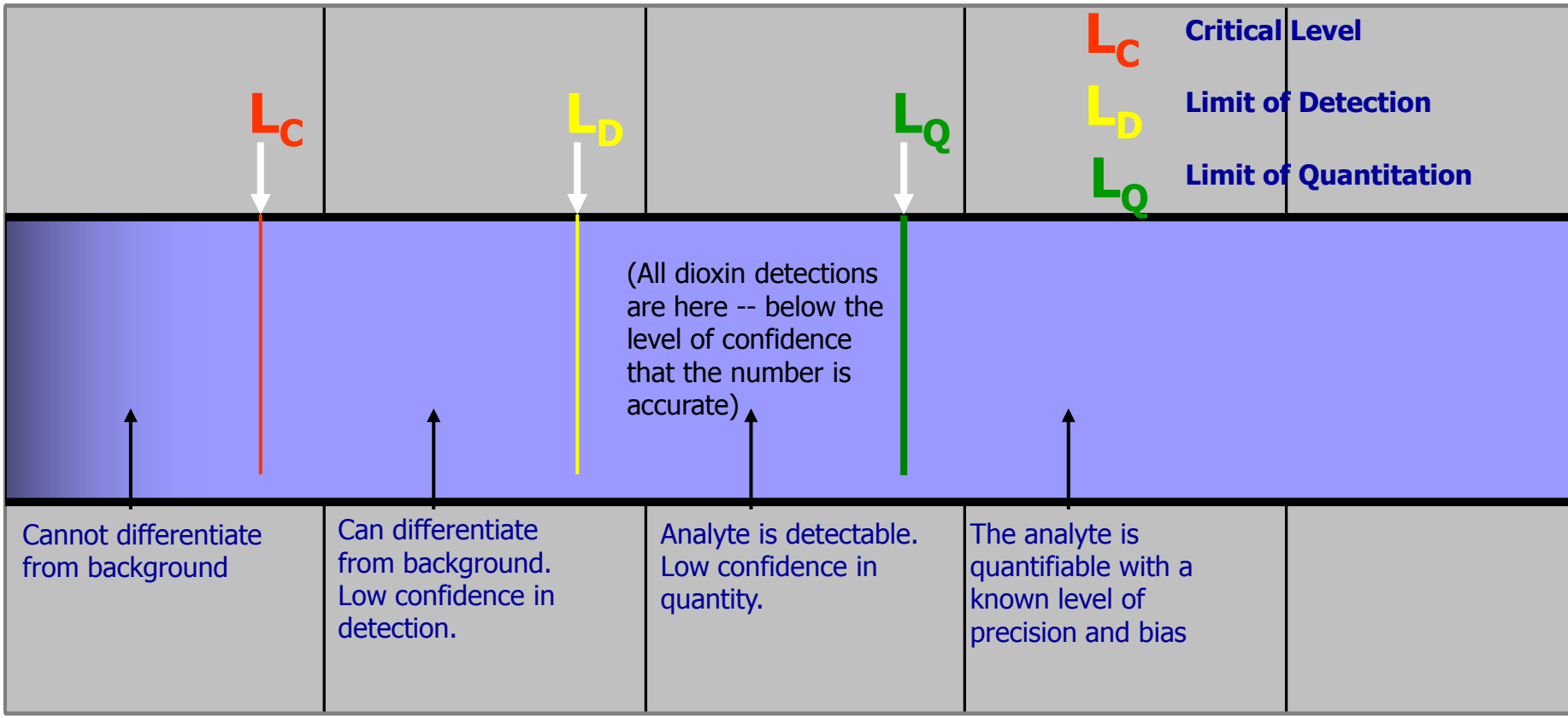
NHSM Fixes

- List residuals as non-waste fuels, including:
  - Biomass [such as, Resinated wood, Wastewater and Paper recycling residuals, used Railway Ties]
  - TDF and used oil
- Urban wood (clean C&D) as traditional fuel/clean biomass
- Ensure contaminant legitimacy criteria do not prevent materials becoming fuel – make discretionary factor
- Create workable petition process for classifying other NHSM as non-waste fuels
- Address contained gas to reflect comfort letter to AF&PA

Boiler MACT: Unachievable

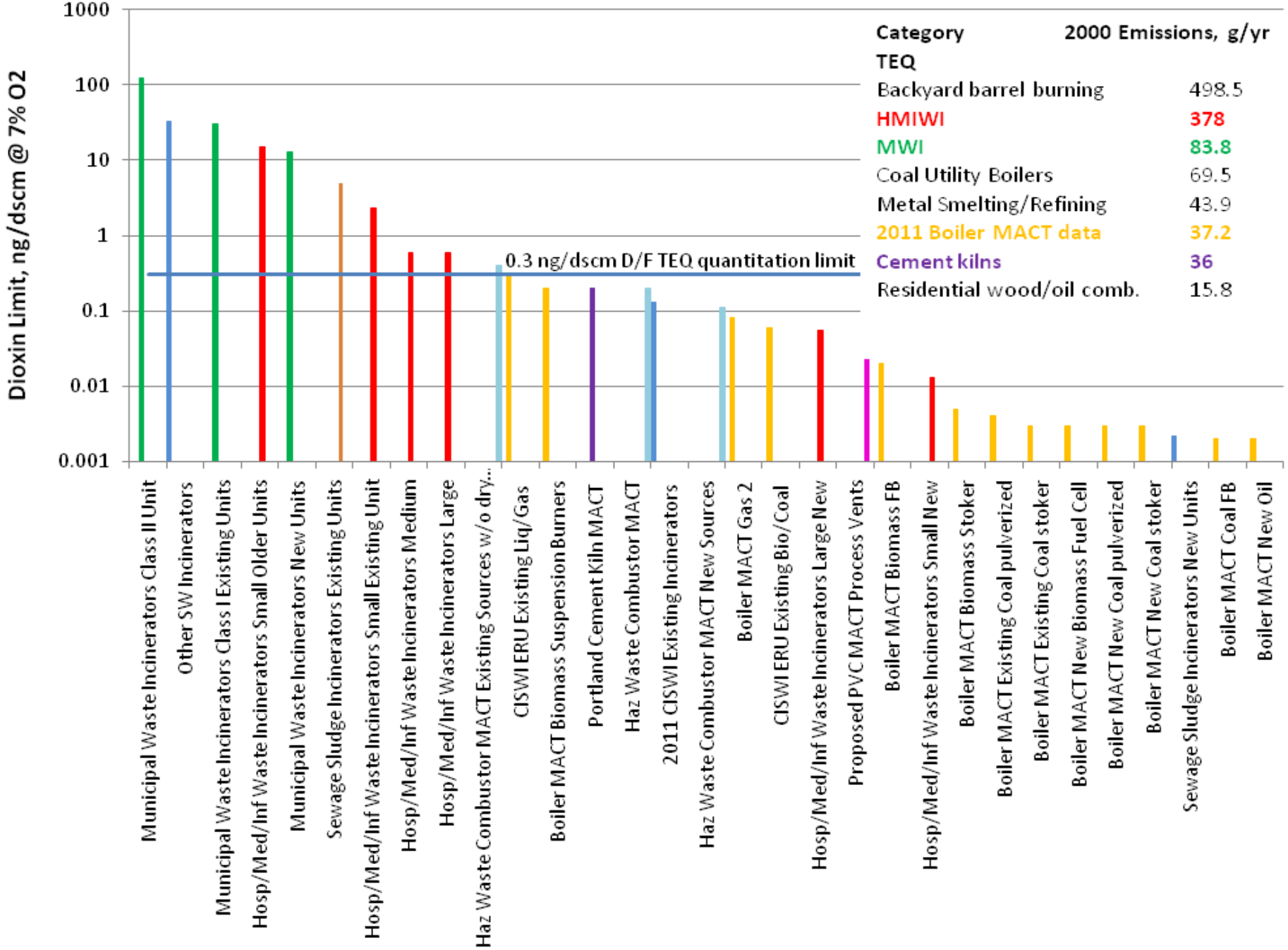
- Unachievable biomass limits for **Carbon Monoxide**
  - ***Problem***: Many biomass boilers cannot consistently meet CO limit
  - ***Solution***: set feasible short term limits and alternative longer-term (monthly) limits that reflect data variability; mine existing data as much as possible; use Upper Permissible Limit at 99.9%
  - Biomass Stokers: ~900 ppm (3-hr) and ~500 ppm (monthly)
  - Biomass Fluidized bed: ~700 ppm (3-hr) and ~350 ppm (monthly)
- Unachievable limits for **Dioxin**
  - ***Problem***: Data are below levels that can accurately be measured (see diagram); results are meaningless at extremely low levels ; limits more stringent than any MACT (see chart)
  - ***Solution***: Adopt reasonable work practices for all subcategories to sustain efficient combustion, as law provides

Method Sensitivity Benchmarks



Analyte Concentration ⟶

Comparison of Dioxin Emission Limits in Various U.S. Regulations



Boiler MACT: Unachievable

- Unachievable **New Source** Limits
  - ***Problem***: non-gas boilers can't reliably meet; discourages replacement of older boilers/modernization including new biomass units
  - ***Solution:*** test methods can't measure at these levels so adjust limits to reflect quantitation limits

HAP/Surrogate	Biomass Stokers	Biomass Fluidized
PM (lb/MM Btu)	~0.01	~0.008
CO (3-hr in ppm)	550	300
CO (monthly in ppm)	~400	~250
Mercury (lb/T Btu)	~3.5	~3.5

Boiler Testing

- Four CO CEMs tests getting underway on top performing stoker and fluidized bed biomass boilers
- Best to have year of data given operational and fuel changes – wettest biomass January to May
- If EPA finalizes in April, only have Nov-Jan test data
  - will continue to test some units beyond January
  - every extra month important depending on "mining" of existing data
- Notice of Data Availability – consider late data

Reasonable Particulate Limits

- The depressed housing market has hit the wood product industry especially hard with 128,000 jobs lost since 2008 (28% of the work force)
- Banks will not lend money or companies cannot commit capital for controls - mills will close
- PM limits based on the unique fuels, products and boiler designs could make the limits affordable and protective
- More compliance time, may see return to profitability

Adequate Time to Comply – Five Years

- Three years insufficient given the investment of billions of dollars – need 5 yrs; Incinerators get up to 5 yrs.
- Most complex set of requirements manufacturers have ever faced and in the worst economy since passage of the Act.
- Evaluation of control strategies for five pollutants plus other obligations requires many engineering studies and planning.
- Competition fierce for control vendors and qualified consultants given other rules (e.g., Utility MACT, CSAPR)
- More time increases the odds that mills will return to profitability and be able to afford controls rather than close
- Periodically report progress – did in Paper Cluster MACT
- Ask for comment in the preamble on extra two years

Other Reconsideration Issues

- Minimum of 90 day comment period to examine floor data and multiple rules together
- PM CEMS not justified
- Retain work practices for start-up and shutdown
- Achievable liquid fuel limits (very low CO and PM limits) – distillate and residual subcategories
- Defer energy audit for GACT sources by 2 years
- New Source date should be reset with this proposal