

How Major Issues are Addressed in the 2012 Boiler MACT Reconsideration Rule

<u>Industry Issue</u>	<u>Industry Recommendation</u>	<u>Outcome</u>	<u>Fed Register Reference / Citation</u>
Support dioxin and gas 1 work practices	Finalize work practices instead of numerical limits.	Final rule requires tune-up for dioxin and for gas 1 boilers, no numerical limits.	78 FR 7138, 7142; Table 3 to Subpart DDDDD
Support 5-year tuneup frequency for some units	Finalize the 5-year frequency	5-year tune-ups for gas/light liquid units <5 MMBtu/hr, units with continuous O2 trim systems, limited use units. Flexibility in tune-up frequency for units that sell electricity and units where entry in to a vessel is required.	78 FR 7146; §63.7500(c)-(e); Table 3 to Subpart DDDDD
Support work practices for startup and shutdown but need changes	Work practices are appropriate for startup and shutdown; procedures need to be site specific.	Rule specifies work practices for startup and shut down. You must either burn clean fuels or engage your control device on startup. Definitions based on steam not load. Monitors must be operated but data not counted in 30-day averages.	78 FR 7142, 7146; §§63.7540(d), 63.7575; Table 3 (items 5 & 6) to Subpart DDDDD
Compliance timeframe	A longer timeframe for compliance should be allowed. Compliance dates should be reset.	Compliance dates were reset to 3 years from FR publication. Preamble has a discussion of what factors states can consider when granting extra year.	78 FR 7143; §§63.7500(a)(1), 63.7510

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Realistic new source limits	Set achievable limits that do not discourage investment in new systems. Need to be able to get guarantees from vendors. Don't set limits below measurement capability.	Some of the new source CO limits got better. Petition for better new source limits denied on grounds that we already had opportunity to comment and no new data was submitted.	78 FR 7150
Achievability of CO limits	Liquid, Gas2, PC, and some CO CEMS limits are not achievable. EPA should consider alternate approaches for CO, including not setting numerical limits for fossil fuel boilers like done in MATS.	CO limits got better, good discussion in preamble. Minimum standard is 130 ppm at 3% O2. Petition to set alternate THC standard denied.	78 FR 7144-7145
Data quality and floor setting	Data set still has errors, data set is biased, should not use <5 sources in floor.	No change.	78 FR 7138, 7142
Limit of Detection	EPA improperly determined the representative detection limit for floor setting.	No change in RDL procedure. However, "Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance."	§63.7520(f)
CO Sub-categories	Support separate CO subcategories	Retained.	78 FR 7138, 7141, 7144; §63.7499
Solid fuel subcategory	Need to account for Cl and Hg variability. Some groups oppose grouping coal and biomass into one subcategory.	Coal and biomass are together for HCl and Hg. Fuel variability factors were incorporated, excluding outliers.	§63.7499; Table 1 (item 1), Table 2 (item 1)

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Liquid subcategory	Support light and heavy liquid subcategorization.	Retained.	78 FR 7141, 7144; §63.7499
Limited Use Units	Support limited use subcategory, should be 10% capacity factor though.	Changed to 10% capacity factor.	78 FR 7144; §§63.7555(d)(3), 63.7575
Emissions averaging	Should be able to use across subcategories. Should be able to use if a boiler is re-powered and switches to another subcategory.	Cannot average across subcategories. Can average if using CEMS or PM CPMS.	78 FR 7152
CO CEMS	Support alternate CO CEMS based limits where numerical limits are set. Need adjustments to floor setting approach and clarifications on averages and CEMS location requirements.	CO CEMS alternate limits retained. Averaging times lengthened and defined. CEMS location still says "outlet" of the boiler or process heater, CO and O2 must be at the same location.	78 FR 7146; §63.7575 §63.7525(a)(1)
TSM	Support TSM alternative, add for liquid.	TSM retained, added for liquid. TSM test methods added to rule.	78 FR 7144; §63.7505(c)
Monitoring	Support flexibility for HCl and Hg. Should add option for SO2 CEMS for HCl.	Can use PM, HCl, Hg CEMS for compliance instead of parameter monitoring. Option to use SO2 CEMS for HCl compliance monitoring where scrubbing.	78 FR 7143; §63.7505(c)
PM CEMS	Drop PM CEMS/CPMS, especially for biomass.	PM CPMS only required for units ≥ 250 MMBtu in coal and heavy liquid subcategories.	78 FR 7143; §63.7525(b)
O2 monitoring	Support O2 trim option but need clarifications.	No significant changes.	78 FR 7146; §63.7525(a)(7)
Averaging periods	Support 30-day averaging periods, need clarifications.	Operating parameters are 30-day averages. Definition of how to calculate revised, does not include data during startup or shutdown. Operating load still needs an averaging period.	78 FR 7146; §§63.7525(d)(4), 63.7575
CEMS data availability	EPA should incorporate minimum data availability provisions instead of requiring valid data for all operating hours.	No change. Failure to collect required data is a deviation from the monitoring requirements.	§63.7535

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Operating parameter limits	Need additional flexibility to adjust parameter limits based on load, etc.	No change.	Table 7 to Subpart DDDDD
Stack Testing	Frequency should not be annual.	No change.	78 FR 7152;
Fuel analysis	Requirements for gases need further revision. Should not have to do monthly analysis if no new shipments received.	If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification, no further sampling is required. If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification, only semi-annual sampling need to be conducted. If the initial mercury constituents are greater than 75 percent of the mercury specification, monthly sampling is required.	78 FR 7147; §63.7541(c)
Malfunctions	Affirmative defense for malfunctions is not an appropriate solution.	Affirmative defense retained, some changes made. Eliminated “exceedance” and “excess emissions” and replaced with “violation” to indicate you only use if you’ve violated the standard due to malfunction. Eliminated 2 day notice requirement, changed 45-day report to include with compliance report.	78 FR 7147; §63.7501
Energy Audits	Need to revise the scope of the energy assessment, still too broad.	The energy assessment for facilities with affected boilers and process heaters having a combined heat input capacity greater than 1.0 TBtu/yr will be up to 24 on-site technical labor hours for the first TBtu/yr plus 8 technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 technical hours, but may be longer at the discretion of the owner or operator.	78 FR 7146, 7150; §§63.7500(c),(e), 63.7575; Table 3 (item 4) to Subpart DDDDD

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Solid waste and fuel switching	Units should be able to switch back and forth between 112 and 129 depending on whether they are burning solid waste. The 6-month wait time should be removed.	No change. Still have 6-month requirement.	§63.7495(e)
Output based limits	Support flexibility.	Output based limits retained.	§63.7500(a)(1); Tables 1 & 2 to Subpart DDDDD
Clarification on natural gas curtailment	Need clarification on what constitutes gas curtailment. Need to allow curtailment based on high cost/penalty in contract. Term “halted” is a problem.	Definition revised slightly, but still not exactly what we wanted. “Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.”	§63.7575 – “ <i>Period of gas curtailment or supply interruption</i> ”

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Hot water heater definition	Hot water heater definition – new 1.6 MMBtu cutoff is good but definition needs clarification.	Definition clarified. “Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.”	§63.7575 – “ <i>Hot Water Heater</i> ”
Gas 1, gas 2, and liquid definitions	Need to be revised.	No change to minimum liquid firing in gas 1 unit. Gas2 unit definition revised to indicate no liquid.	§63.7575 (<i>various</i>)
Waste heat boiler and process heater definitions	Need to be revised.	Definitions revised, removed limitation on supplemental burners.	§63.7575 – “ <i>Waste heat boiler</i> ” & “ <i>Waste heat process heater</i> ”

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Definitions	Daily block averages and 30 day rolling averages should not include data during S/S.	Definition revised. "30-day rolling average means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent."	§63.7575 – "30-day rolling average"
Quarterly reporting	Quarterly reporting of all monitoring data not necessary.	No change.	§63.7525
Curtailement notification	Requirement to notify within 48 hours when oil is burned due to gas curtailement is not necessary.	No change.	§63.7545(f)
Plan approval	Plans should be considered approved if no response from regulators prior to compliance date.	No change.	§§63.7505(d)(1), 63.7521(g)(1), 63.7522(g)
Cost	Rule will cost more than EPA says.	EPA's cost estimate still <\$5B and ours is \$12B. They project no new oil or coal units. Their cost estimate assumes that all liquid units that can burn some gas will convert to gas instead of adding controls.	78 FR 7138-7139