



Overview of the September 9, 2010 PC MACT Rules

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What Is In New Rule?

- 40 CFR 63 Subpart LLL Revised
- Applies to All PC Kilns
- Revamped Standards for Kiln and Main Sources
 - New standards for Hg, THC, HCl
 - Revised standards for PM
 - Continued D/F standards
- Applies During All Operations
 - Normal and Malfunctions
 - Startup & shutdown (separate limits from normal)

What Is In New Rule (con't)?

- Existing or New Raw Material Dryer
 - 10% Opacity Limit at Major Sources
- Longer Opacity Readings on Other Regulated Sources
- CEMS and CMS Monitoring Requirements
- New Open Clinker Storage Pile Requirements
- 3 Years Compliance Timeframe
- Companion Rule: Revised NSPS
- Potentially Overlapping Rule: CISWI (Final Expected December 2010)

Revised LLL MACT Standards (9/9/10 Final Rule)

	Previous Standards (existing new)	Existing Kilns (normal/SS)	New Kilns (normal/SS)
PM	0.3 #/ton feed ~ 0.5 #/ton clinker ~0.04 gr/dscf	0.04 #/ton clinker 0.004 gr/dscf	0.01 #/ton clinker 0.0008 gr/dscf
D/F	0.4 ng/dscm or 0.2 ng/dscm @<400°F	Same (10°F increase in Temp during SS)	

- PM applies to kiln and clinker cooler
- 30 Day Rolling Average for Normal Operations
- 7 Day Rolling Average for Startup-Shutdown (SS)

Additional MACT Standards

	Existing Kilns (normal/SS)	New Kilns (normal/SS)
Hg	55 #/MM ton clinker 10 ug/dscm	21 #/MM ton clinker 4 ug/dscm
THC	24 ppmvd @ 7% O ₂ 24 ppmvd (no O ₂ correction)	
HCl (Major Sources)	3 ppmvd @ 7% O ₂ 3 ppmvd (no O ₂ correction)	

- THC also applies to raw material dryer (19% O₂ correction)
- 9 ppmvd total organics alternative limit with site-specific THC limit
- 30-day rolling average for normal operations
- 7-day rolling average for startup-shutdown operations

Additional Rule Components

- 10% Opacity Limit for New/Existing Raw Material Dryers (Major Sources)
- CEMs and CMSs Required
 - PM, Hg, THC; HCl (if no wet scrubber)
 - Production Monitors/accuracy requirements
- Affirmative Defense Approach for Malfunctions
- Initial Testing
 - 1st 30 days of CEMS use/180 days to stack test
- Ongoing Stack Testing - 30 Month Cycle

Additional Rule Components (con't)

- Opportunity to Revisit Plans and Procedures
 - O&M, CMS QA, related SOPs, additional recordkeeping and reporting
- Revised Language for Changes in Operations
 - If adversely affecting compliance with standard operating limit or monitoring value:
 - 60 day notice prior to change
 - 360 hour prep/test time limit inserted for operating under revised limit
 - Submittal of monitoring data during pretesting as part of report

Open Clinker Pile Work Practices

- > 1,000 Feet from Property Line
 - 3-sided covered storage with wind fence on uncovered side
 - Inactive piles covered with tarp
- < 1,000 Feet from Property Line
 - Totally enclosed structure or building

Companion Rule - NSPS

Kilns/ Clinker Coolers	Construct/ Reconstruct/Modify 8/17/71 – 6/16/08	Construct/ Reconstruct/Modify after 6/16/08	New Units
PM	≤ 0.3 / ≤ 0.1 (#/ton dry feed)	≤ 0.01 for both	#/ton clinker
Opacity	$\leq 20\%$ (if no CEMS)		
NO _x		≤ 1.5 N/A to alkali bypass	#/ton clinker
SO ₂		≤ 0.4 (or 90% removal across APCD)	#/ton clinker

30 Day Rolling Averages

MACT Implementation

-- 3 Year Timeline --

- Digest Rule
- Strategy 'Team' Meetings
- Collect and Analyze Data
- Conduct Gap Analysis
- Develop Detailed Timeline/Actions
- Evaluate, Order & Install APCD(s) and CEMs
- Permit New Equipment/Update Title V
- Update Operating Plans, Recordkeeping System & Train Employees

Compliance Planning Questions

- How Will Compliance with New Rule Impact Operations?
- What New Control Technology May Be Required?
- What Actions Need Accomplished When for 3-year Compliance Timeline?

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