SPPD Multi-pollutant Sector Work

EPA's Air Quality Management Plan Workshop

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What are Sector-Based Multi-pollutant Approaches?

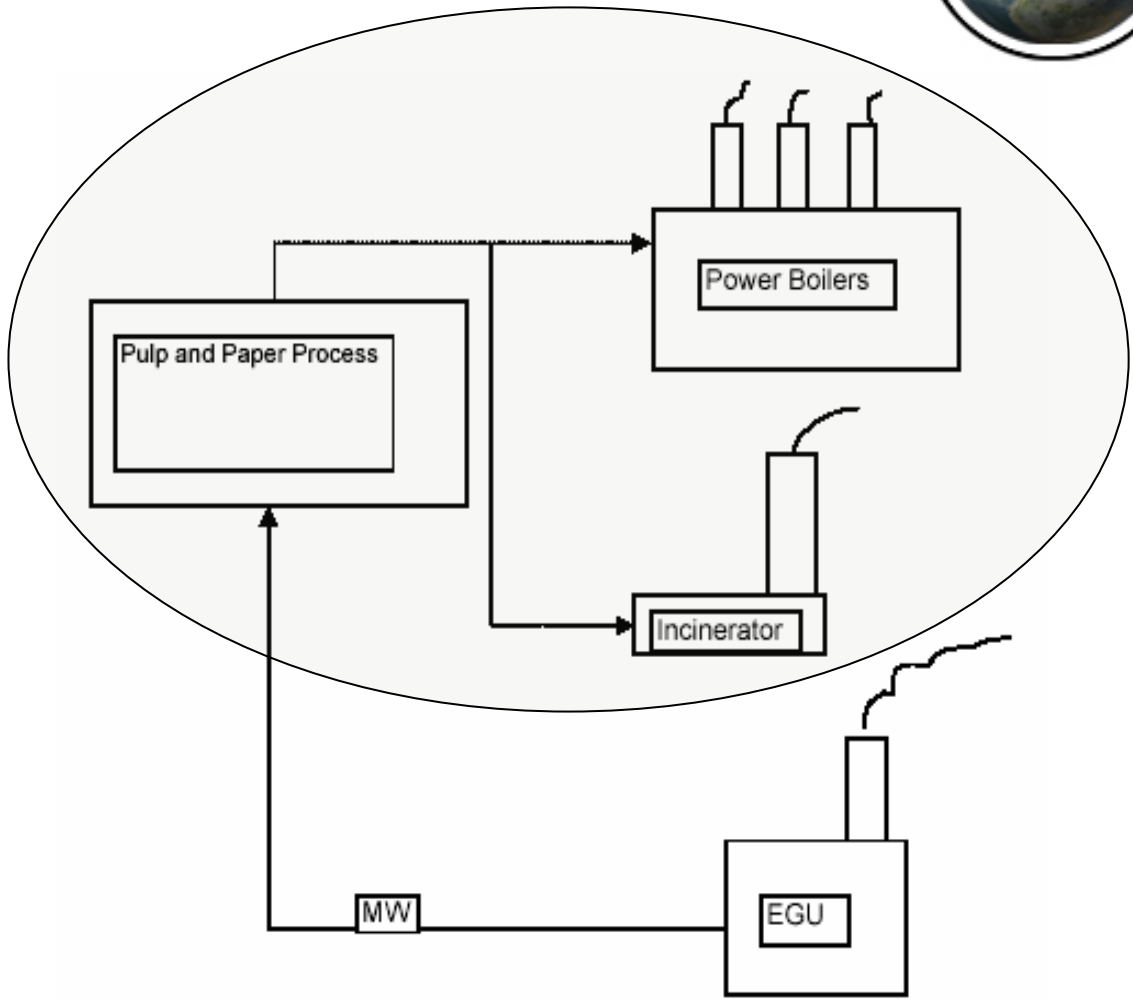
- Approaches that:
  - Consider how emission reduction options affect all pollutants
  - Applied to larger groupings of sources within a fenceline
  - Include measurable environmental improvement
  - Rely on replicable and consistent emissions inventories and numerical metrics

Extending the Boundary

1. Capturing Process Efficiencies

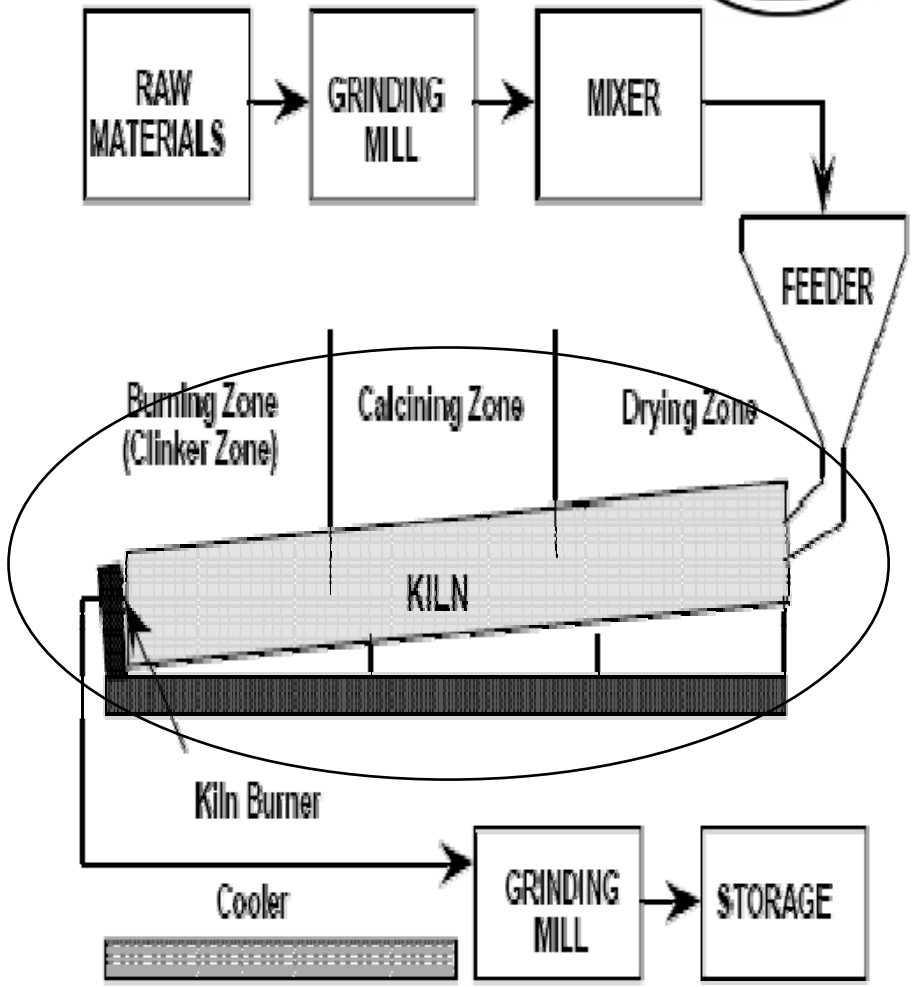
   - a lb/ODTP from the entire facility would reflect more efficient choices

   - incorporating a “power” component in lb/ODTP could allow credit for cogeneration



Developing Comprehensive Control Strategies

- Portland Cement Sector
  - Emissions from the kiln system
    - 95% of NO_x
    - 97% of SO_2
    - 36% of PM10-PRI
    - 45% PM 2.5-PRI
  - PM is a surrogate for HAPs
  - Potential Hg co-benefits from SO2 controls and/or vice versa
  - Potential CO and VOCs co-benefits from THC controls



What are the Benefits?

- Increase efficiencies
  - Focus on reducing emissions of greatest public benefit
  - Allow more cost-effective compliance strategies
  - Align control strategies to avoid “stranded” costs
  - Avoid bad decisions
- Increase flexibility
  - Allow for emissions netting for sources within the boundary
  - Consolidate monitoring, recordkeeping, reporting
- Simplify compliance strategies
  - Transparency
  - Certainty
- Lessen potential for conflicting requirements
- Improve ability to integrate into business planning and decision making

Refinery Fluid Catalytic Crackers

Refinery FCCU	A	B	C	D	E	F
Ammonia Injection Rate (lbs/day)	3178	2500	2400	718	130	None
Filterable PM10 (lb/Mlb coke burn)	0.66	0.15	0.08	0.13	0.43	0.35
Condensable PM (lb/Mlb coke burn)	1.17	4.23	1.82	2.67	0.12	.08
Total PM (lb/M lb coke burn)	1.83	4.38	1.90	2.80	0.55	0.43

Possible Long-Term Sector Strategies

- Put everything on an 8-year cycle (standard regulatory review)
- Consolidate requirements
- Combine analyses for multi-pollutant considerations
- Use regulations and rule formats to require submission and collection of data to feed inventories and information systems (basis for future regs)
- For residual risk, model entire facility

Petroleum Refinery Sector Regulatory Summary

Emission Point	Current Regs
Boilers	NSPS: Db MACT
Process Heaters	NSPS: J, Ja
FCCU, Reg, SRP	NSPS: J, Ja MACT: UUU
Process Vents	MACT: CC
Wastewater	MACT: CC Part 61: FF NSPS QQQ
Storage	NSPS: Ka,Kb MACT: CC,EEE NESHAP
Loading	MACT: CC, EEE NESHAP
Equipment Leaks	MACT CC, UU, TT NSPS GGG,VV NESHAP

Regulatory Actions

NSPS Db tech review
New Boiler MACT

NSPS tech review

UUU Residual Risk Rule and Technology Review

CC Residual Risk Rule and Technology Review
EEE Residual Risk Rule

NSPS tech reviews

Sector Approach

Sector Rule

Sector Rule

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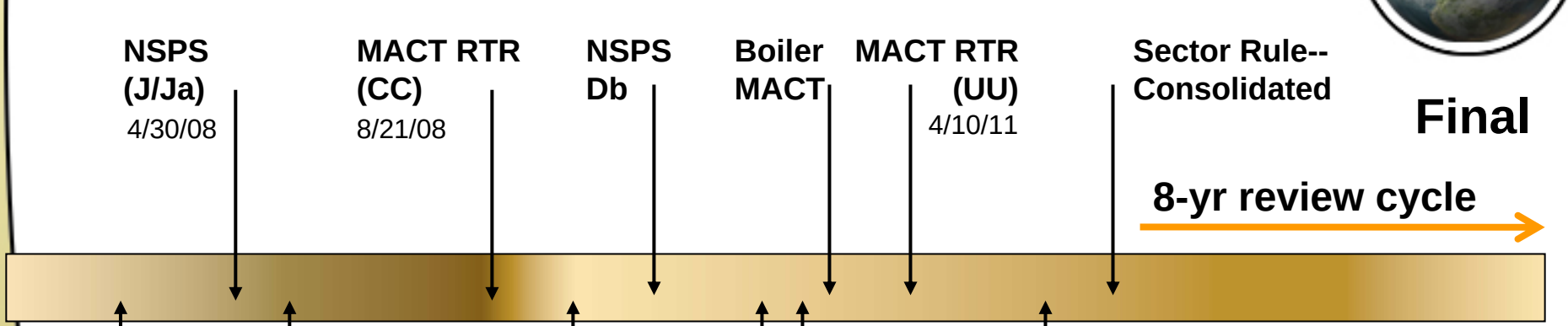
Petroleum Refinery Sector Strategy



- CC
- Ka, Kb, EEE
- Part 61 (FF), NSPS QQQ
- Consolidate equipment leaks
- Fenceline monitoring or ORS component
- Emission protocol

Notes:

Fenceline Monitoring Study – complete 12/09

DIAL-ORS Advances

Other techniques

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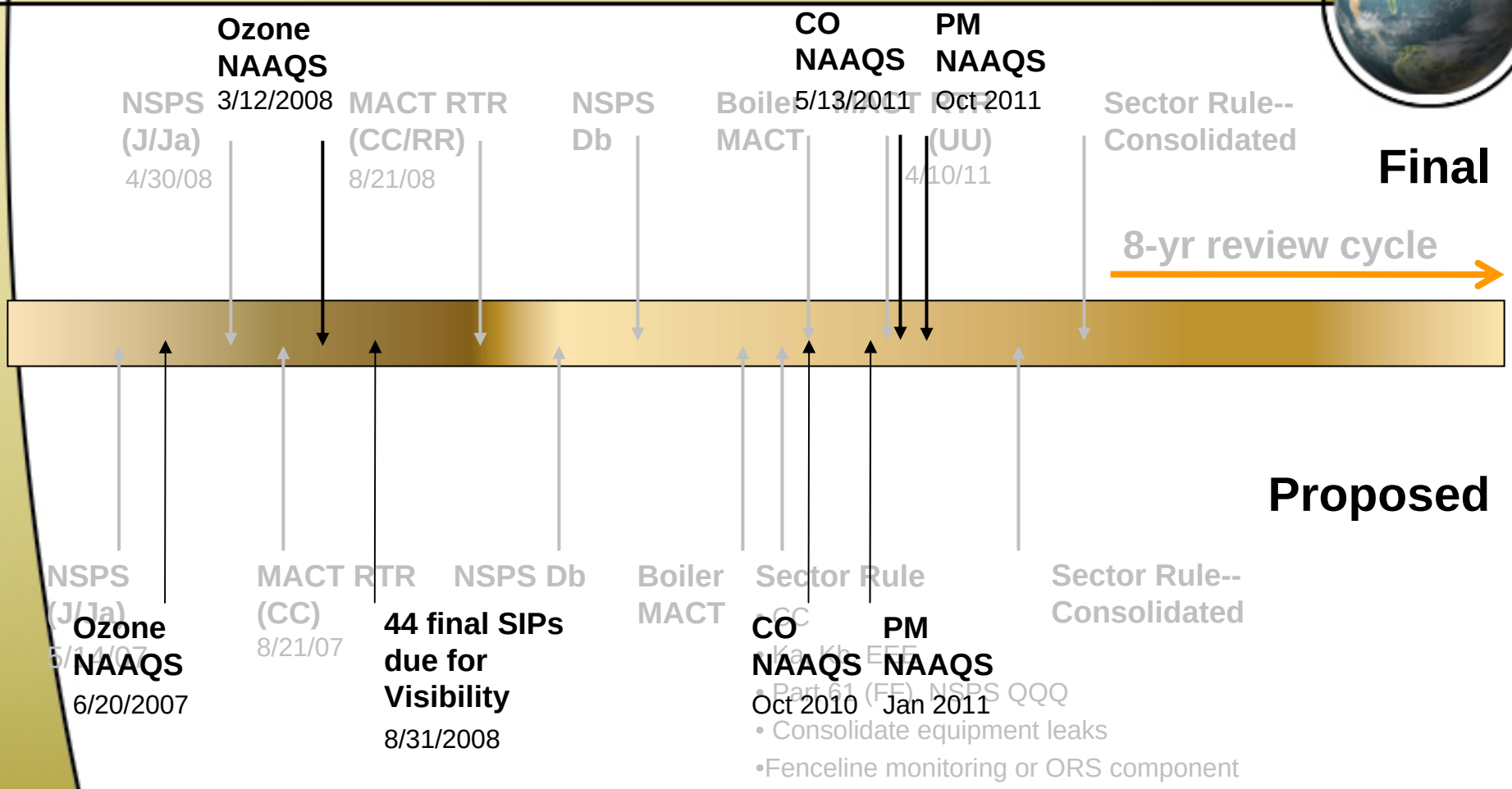
...And How Do Relevant NAAQS Compare?



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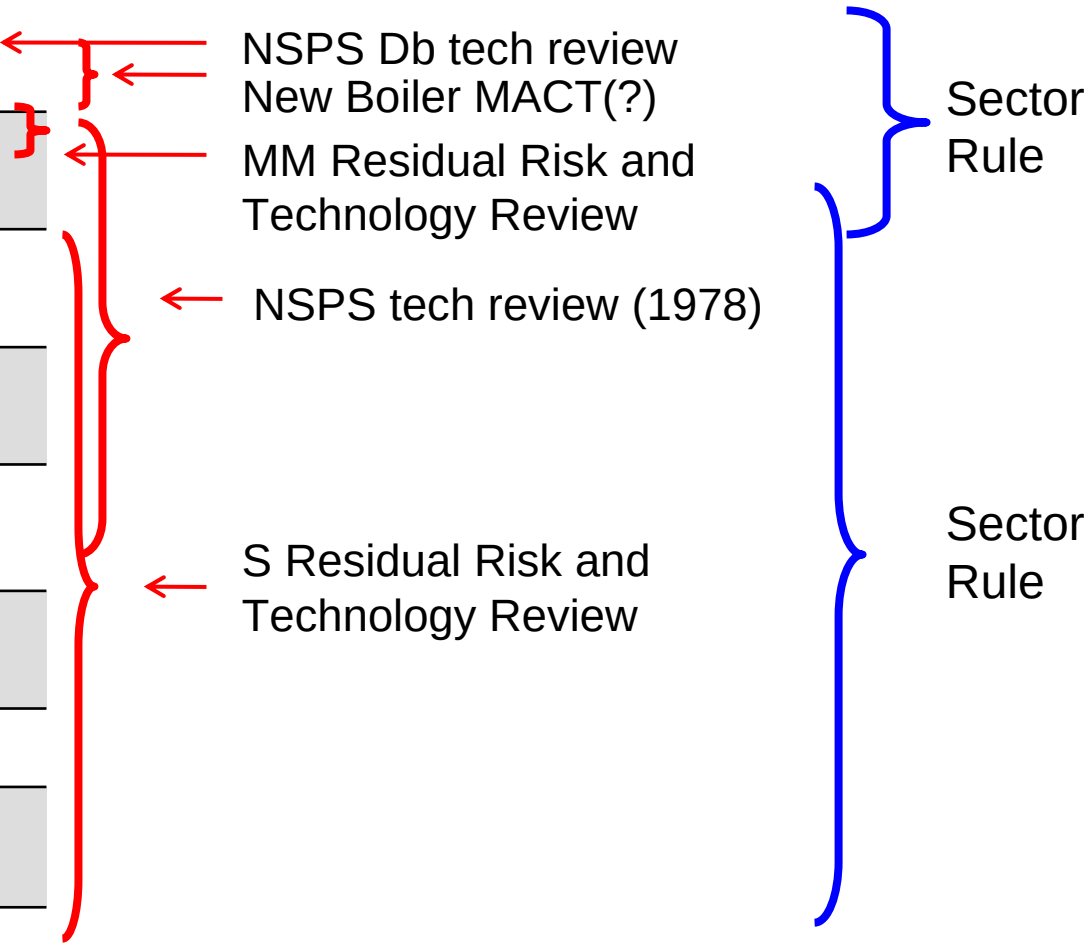
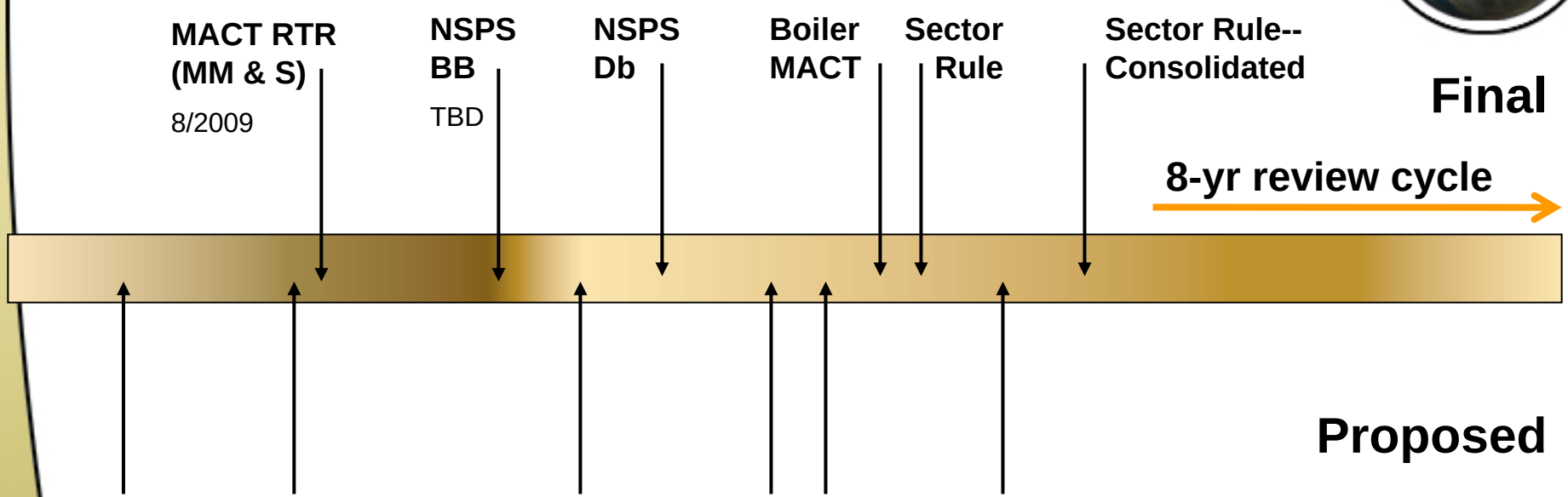
Pulp & Paper Sector – Potentially Included Regulations

Emission Point	Current Regs
Power Boilers/ Steam Generation	NSPS Db MACT
Chemical Recovery	MACT MM NSPS BB
Washing System (Brn Stock Wash)	MACT S NSPS BB
Digester System	MACT S NSPS BB
Evaporator System	MACT S NSPS BB
Causticizing	MACT S
Bleaching	MACT S
Papermaking	MACT S



Pulp & Paper Sector - Timeline



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This Makes Sense…

- Why don’t we do it?
  - Limited Statutory Authority
  - Complicated issues in defining sources or source categories
  - Regulatory Timing
  - Data gaps
    - Emissions characterization / consistency
    - Control availability and use
    - Applicable regulatory requirements / compliance methodologies used
    - Economics

This Makes Sense...

- How do we overcome the obstacles?
  - Address data gaps
    - Improve emissions data / emissions factors
    - Identify use and effectiveness of existing controls
    - Encourage multi-pollutant controls
    - Identify compliance methodologies selected (Notifications of Compliance)
  - Coordinate and communicate
  - Plan for long-term

Contact Information

QUESTIONS??

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