

**Stationary Source  
NO<sub>x</sub> and PM Report:  
An Update**

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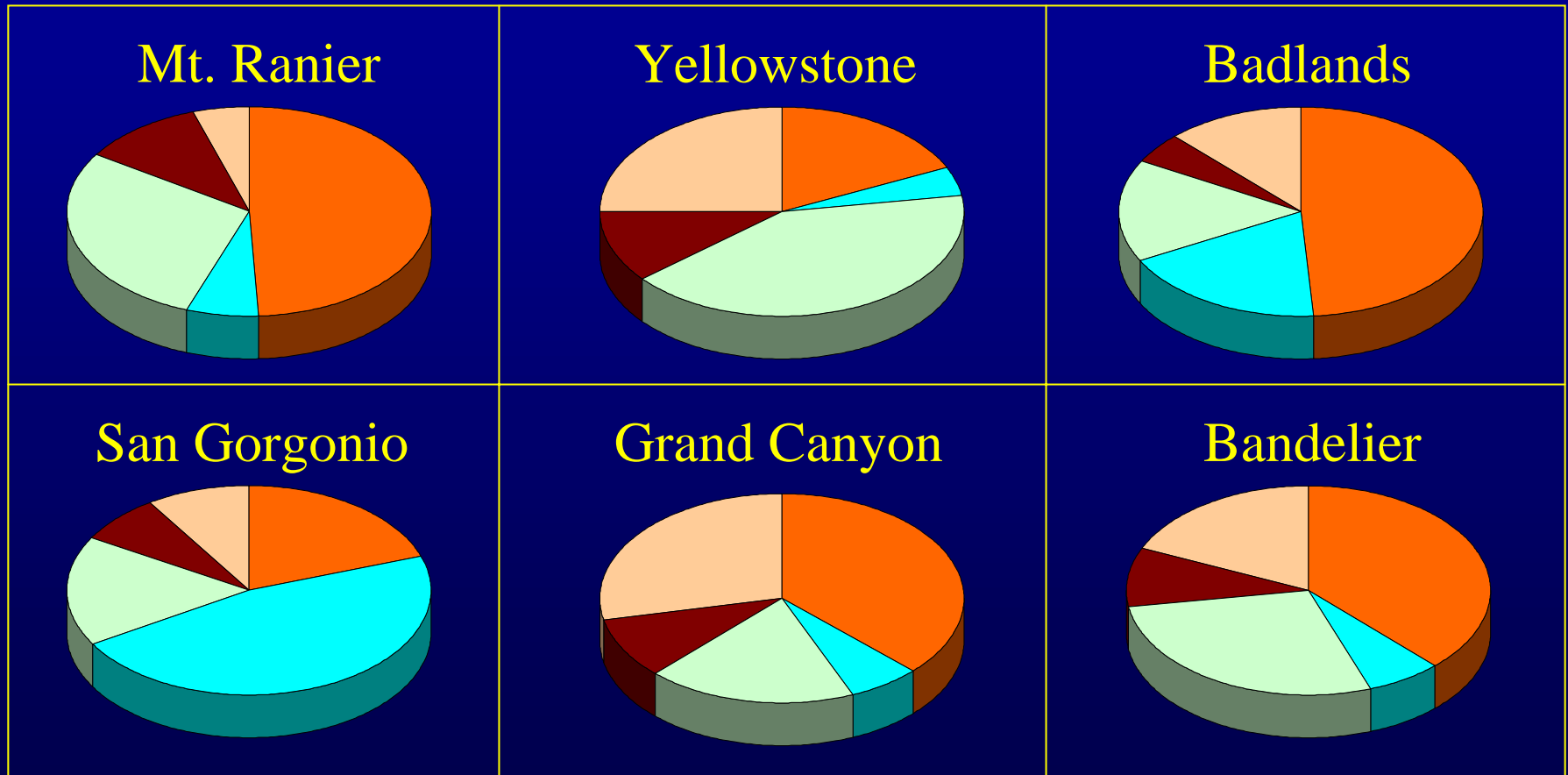
Snowbird, UT

# Presentation Overview

- Nature of stationary sources of NO<sub>x</sub> and PM<sub>10</sub>
- Section 309(d)(4)(v) requirements
- Other considerations
- Proposed approach
- Potential contractors
- Schedule
- Next Steps

# Nature of Stationary Sources

Contribution of PM species to Bext on 20% Worst Days (1995-99)

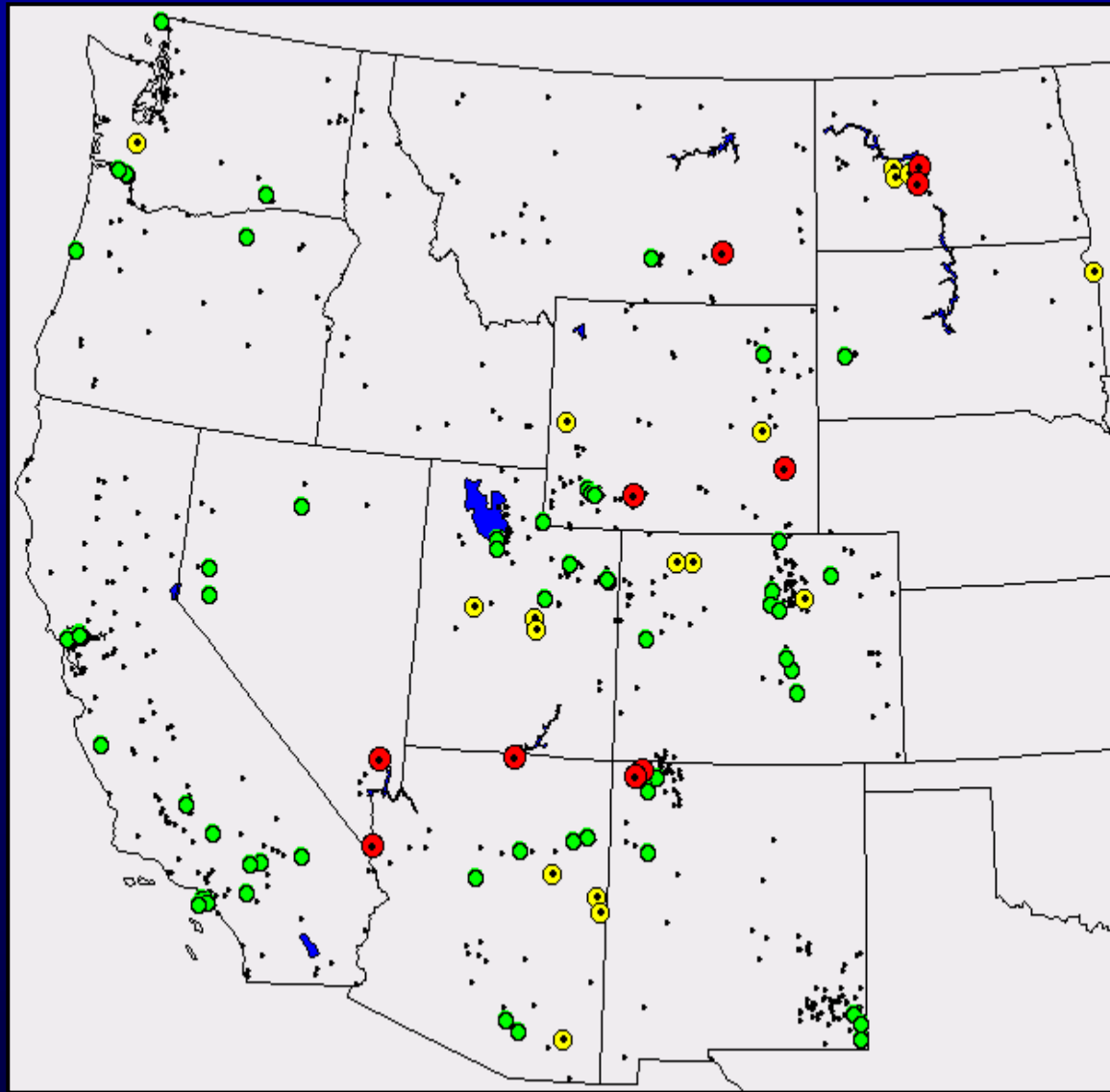


# Nature of Stationary Sources

13-State WRAP Region				
	1996		2018	
NO <sub>x</sub>	1,085,000 tpy	22 %	1,133,000 tpy	33 %
PM <sub>10</sub>	208,000 tpy	6 %	268,000 tpy	7 %

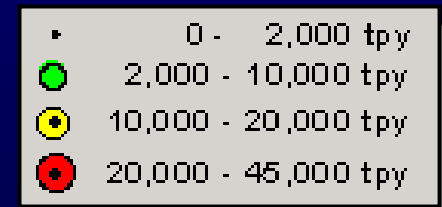
- Stationary source contributions expected to grow.
- Stationary source PM<sub>10</sub> emissions appear less important than NO<sub>x</sub>, but they may contribute more to haze on a per ton basis.
- They may also contribute more on a per ton basis than PM<sub>10</sub> emissions from other source categories.

# Nature of Stationary Sources

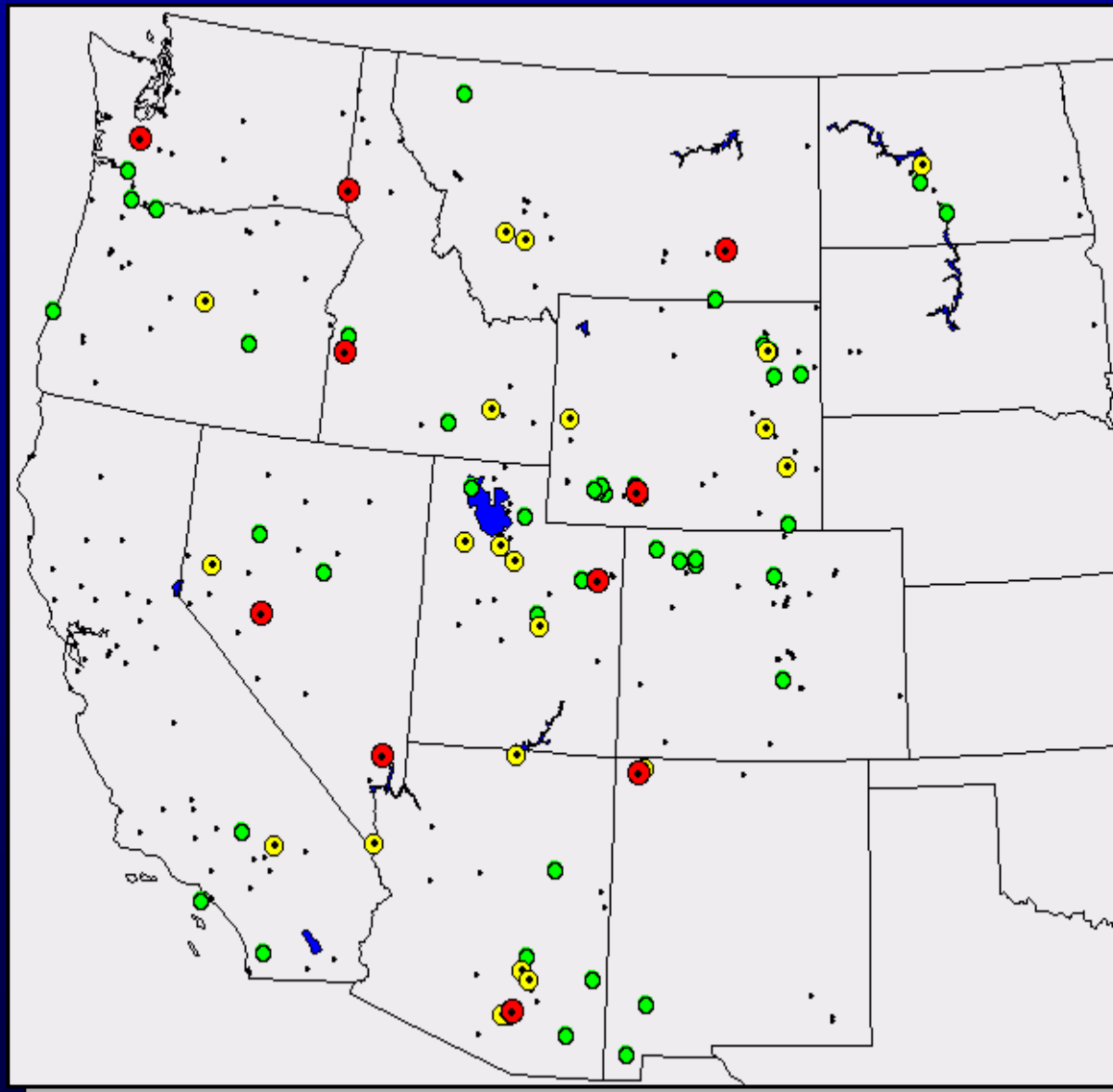


## 1996 NO<sub>x</sub>

- ✓ 765 plants > 100 tpy
- ✓ These account for 94% of emissions
- ✓ 185 are in CA
- ✓ ~150 are power plants

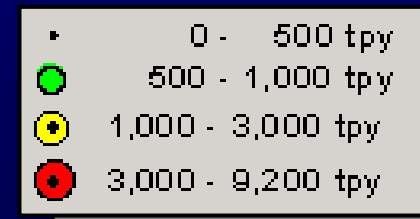


# Nature of Stationary Sources



## 1996 PM<sub>10</sub>

- ✓ 339 plants > 100 tpy
- ✓ These account for 82% of emissions
- ✓ 54 are in CA
- ✓ <150 are power plants



# Nature of Stationary Sources

## NO<sub>x</sub>

- Electricity boilers (63%)
- Industrial ICEs (11%)
- Industrial boilers (8%)
- Mineral products (6%)
- Electricity ICEs (3%)
- Petroleum industry (2%)
- Oil and gas productin (1%)

*95% of emissions  
from sources > 100 tpy*

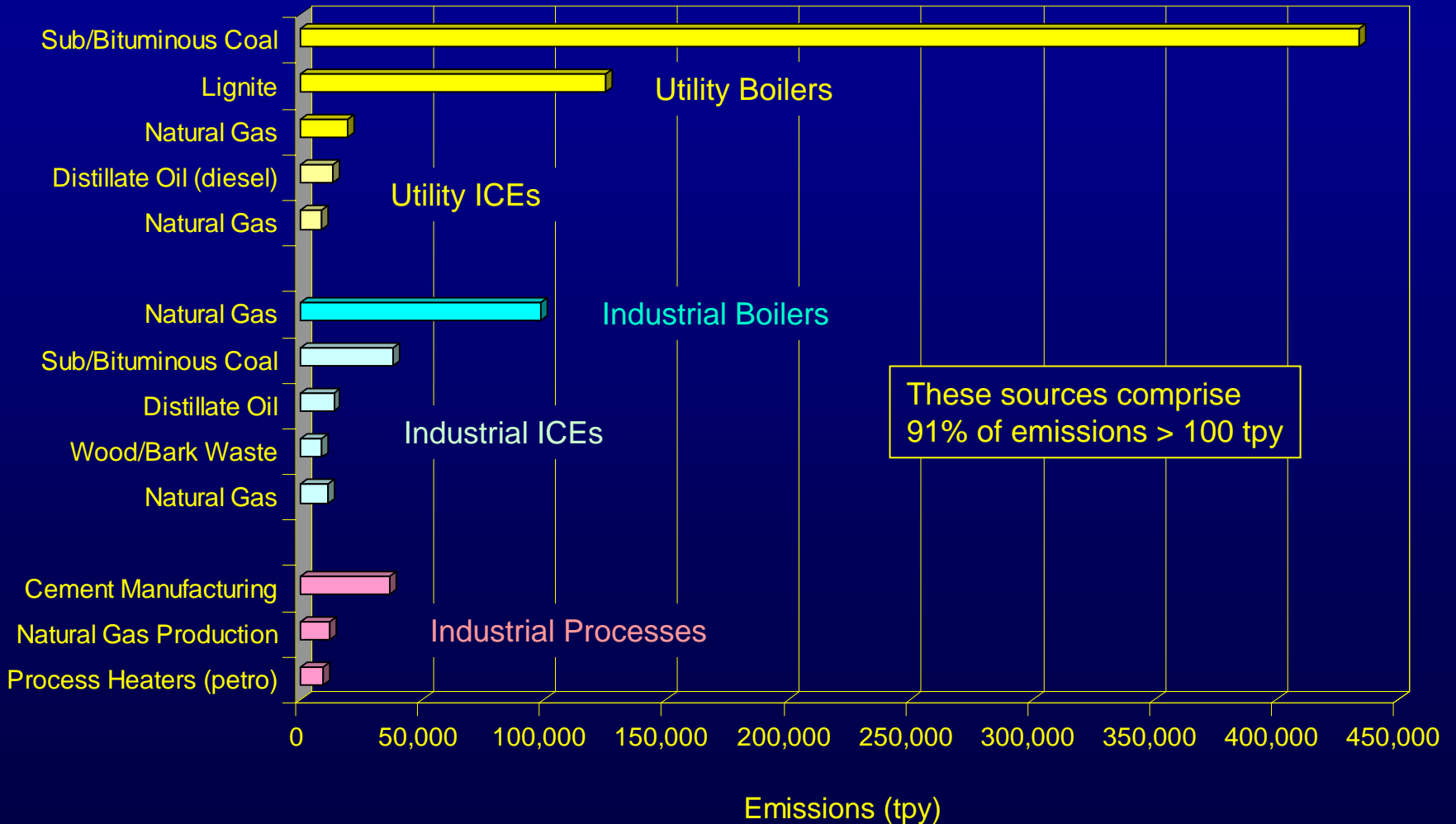
## PM<sub>10</sub>

- Electricity boilers (28%)
- Mineral products (25%)
- Primary metal prod. (19%)
- Industrial boilers (10%)
- Chemical manufact. (6%)
- Pulp, paper, wood (4%)
- Petroleum industry (2%)

*93% of emissions  
from sources > 100 tpy*

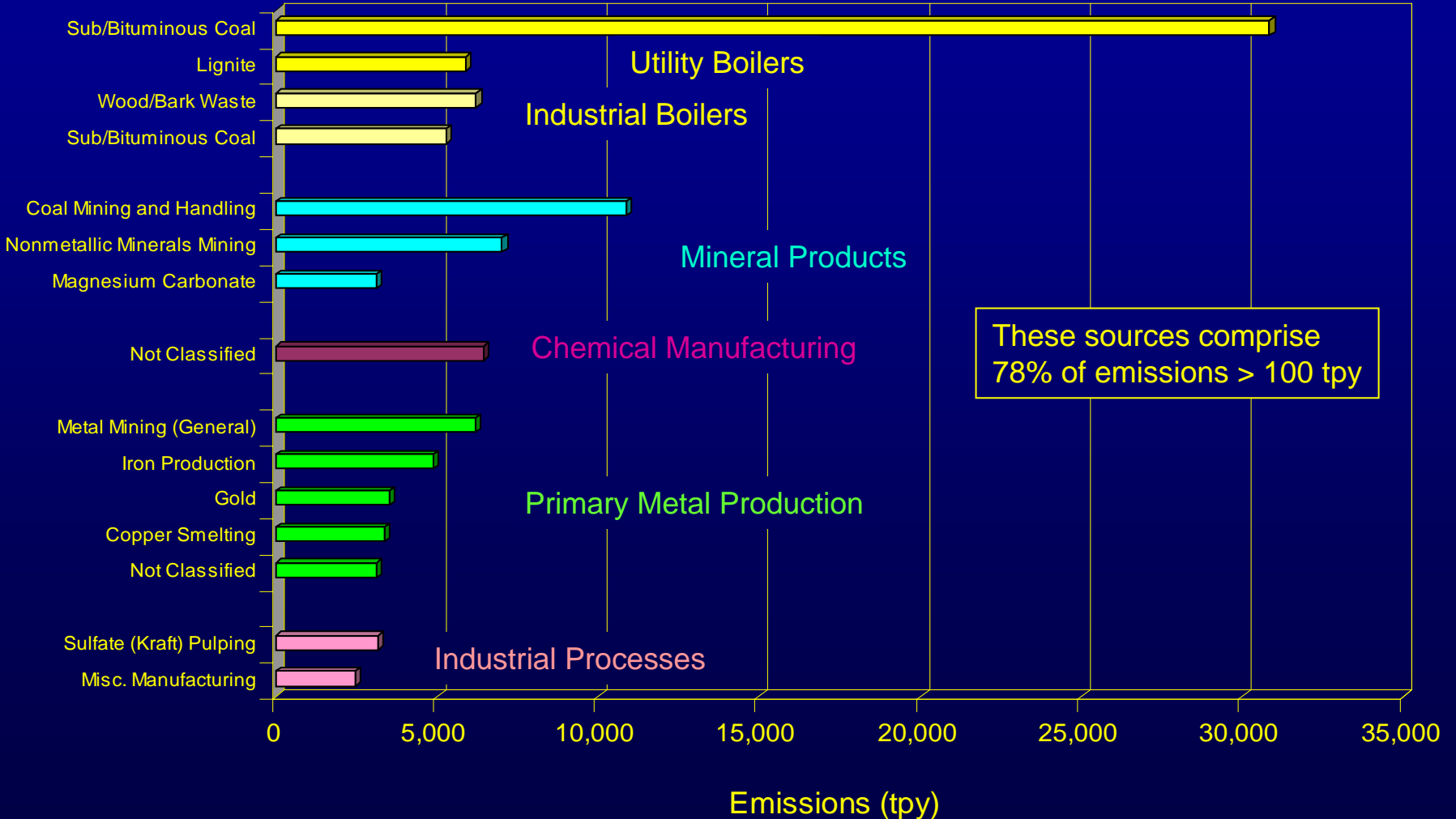
# Nature of Sources

1996 NO<sub>x</sub> Emissions from Stationary Sources > 100 tpy  
in the 13-State WRAP Region



# Nature of Sources

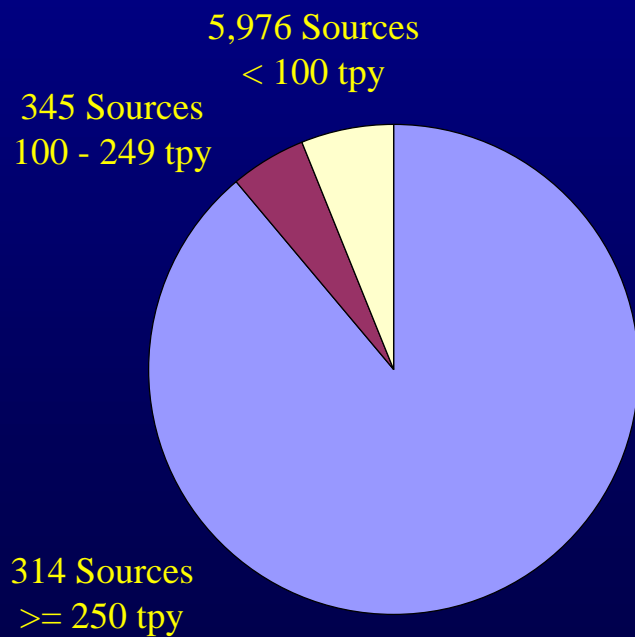
1996 PM<sub>10</sub> Emissions from Stationary Sources > 100 tpy  
in the 13-State WRAP Region



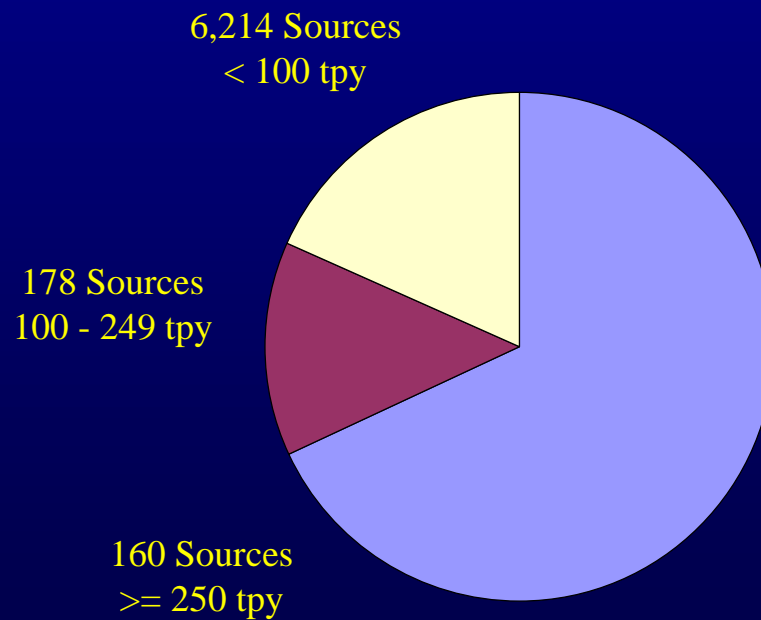
# Nature of Sources

## 1996 Emissions in the 13-State WRAP Region

### NO<sub>x</sub>



### PM<sub>10</sub>



## Section 309(d)(4)(v) Requirements

- SIPs “must include a report which assesses emissions control strategies for stationary source NO<sub>x</sub> and PM, and the degree of visibility impairment that would result from such strategies.”
- The report must evaluate the need for milestones to avoid net increases and to support possible multipollutant and multisource programs.
- The SIP must commit to a 2008 revision containing any necessary long-term strategies and BART requirements for stationary source NO<sub>x</sub> and PM.

# Other Considerations

- §308 states
- Gaps or uncertainties may exist in the inventory that substantially affect the assessment (e.g., existing controls and capacity factors)
- Emission reduction potential
- Control costs
- BART
- Uncertainty of NH<sub>3</sub> inventory

# Proposed Approach

- The report should be a starting point for addressing stationary source NO<sub>x</sub> and PM emissions.
  - What is the relative significance of these emissions?
  - What is a reasonable range of control levels given existing technologies, costs, and benefits?
  - How should the WRAP address these sources more comprehensively over the next few years.
- The report is not intended to recommend strategies, control levels, or define BART.

# Proposed Approach

- Include all 13 “WRAP” states, plus Tier I and II.
- Summarize monitoring and emissions data.
- Make some effort to characterize and improve data gaps and uncertainties in the inventory.
- Sensitivity run to assess need to avoid increases.
  - 25% NO<sub>x</sub> and PM<sub>10</sub> increase from all stationary sources
- Sensitivity runs to assess strategies and results.
  - 50% NO<sub>x</sub> reduction from stationary sources > 100 tpy
  - 50% PM<sub>10</sub> reduction from stationary sources > 100 tpy

# Proposed Approach

- Hire contractor(s) to:
  - Assess and improve inventory where practical.
  - Estimate emission reductions if existing or state-of-the-art controls were applied to uncontrolled or modestly controlled sources.
  - Estimate the costs of such reductions.
- Up to \$115,000 available for contract support

# Potential Contractors

- E.H. Pechan & Associates
- Industrial Economics
- Lindh & Associates
- Sierra Research
- Abt Associates
- Radian
- SAIC
- ICF
- PEI
- ???

# Schedule

- Oct 02 Solicit proposals
- Nov 02 Complete sensitivity runs and analysis
- Dec 02 Summarize monitoring/emissions data
- Dec 02 Initiate contract work
- Apr 03 Complete contract work
- May 03 Report drafted and reviewed
- Jun 03 Report finalized and ready for SIPs

# Next Steps

- MTF, IOC review proposed approach by Oct 15
- Assemble small workgroup to oversee work
- Update and follow schedule previously shown