

RACT in New Jersey



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Division of Air Quality

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Reasonably Available Control Technology

- Technological and economical feasibility

USEPA Guidance (for 1-hr ozone)

- Control Techniques Guideline (CTG) – control of volatile organic compounds from stationary sources (10 - 30 years old)
 1. Group I before January 1978
 2. Group II in 1978
 3. Group III in the early 1980's
 4. Latest 1997

USEPA Guidance (for 1-hr ozone)

- Alternate Control Techniques (ACT) – control of oxides of nitrogen (NO_x) from stationary sources (10 years old)
 - Post-1990 – latest 1994

Existing RACT State Rules

- State developed RACT and adopted RACT rules
 - Subchapter 16 – Control and Prohibition of Air Pollution by Volatile Organic Compounds [N.J.A.C.7:27-16]
 - Subchapter 19 – Control and Prohibition of Air Pollution by Oxides of Nitrogen [N.J.A.C.7:27-16]

Previous Regional RACT Efforts

- Mobile Equipment Repair and Refinishing: Subchapter 16.12
- Solvent Cleaning: Subchapter 16.6
- Additional NO_x Controls: Subchapter 19

Federal 8-hour Ozone Implementation Rule Requirements

- Certify 1-hr Ozone SIP approved RACT represents RACT for 8-hr ozone, or
- Adopt more stringent regulations that now represent RACT
- O₃ RACT SIP revision due September 15, 2006
- Committal SIP (rules to follow)

Proposed Federal PM_{2.5} Implementation Rule Requirements

- RACT requirements
 - PM_{2.5} & SO₂
 - NO_x
 - VOC/ammonia
- PM_{2.5} SIP due April 5, 2008

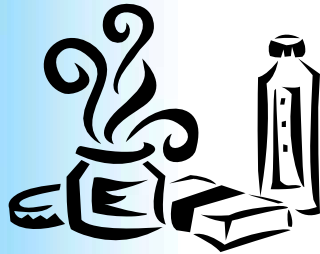
Processes to Identify Candidate Control Measures

- Regional (R)
 - OTC
 - MANE-VU
 - MARAMA
 - NESCAUM
- Workgroups (W/G)
 - Stationary Combustion Sources
 - Volatile Organic Compounds
 - Diesel Initiatives
 - Homes & Restaurants
 - Gasoline Cars & Trucks
 - Non-automobile Gasoline Engines
- Departmental (D)

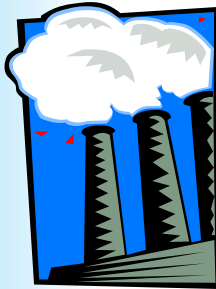
Potential RACT Source Categories

- 1 Asphalt Paving (R, D)
- 2 Asphalt Production (R)
- 3 Industrial Adhesives (R, D)
- 4 Industrial, Commercial & Institutional Boilers (R, W/G, D)
- 5 Industrial Surface Coatings (R, W/G, D)
- 6 Glass Furnaces (R, D)
- 7 Petroleum Refineries (R, W/G, D)
- 8 Petroleum Aboveground Storage Tanks (W/G, D)
- 9 Stationary Diesel Compressed Ignition Internal Combustion Engines (W/G, D)

Workgroup Key



Volatile Organic Compounds
from Processes and Consumer
Products



Stationary Combustion Sources

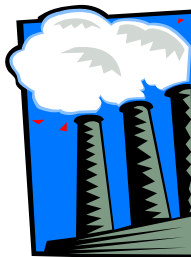


Diesel Initiatives



1. Asphalt Paving

- **Cutback Asphalt and Emulsified Asphalt**
- **Control Measures:**
Amend existing State specific rules
 - **Regional ban in ozone season (or perhaps year-round)**
 - **Establish VOC content limits (for potential exemptions)**
- **Pollutant addressed: VOC**
- **NAAQS affected: Ozone**
- **Still being evaluated by OTC**



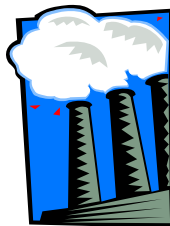
2. Asphalt Production

- Control Measures:
Amend existing State specific rules
 - adopt more stringent NO_x limits
 - MANE-VU (low sulfur fuel – 500 ppm)
- Pollutants addressed: NO_x & SO_2
- NAAQS affected: Ozone, $\text{PM}_{2.5}$
- Still being evaluated by MANE-VU



3. Industrial Adhesives and Sealants

- Control Measure:
 - Establish VOC content limits (industrial and commercial applications)
- Pollutant addressed: VOC
- NAAQS affected: Ozone
- Model rule being prepared by OTC



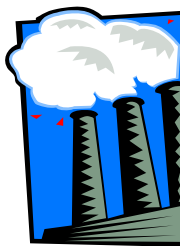
4. Industrial, Commercial & Institutional Boilers

- Control Measures:
 - annual tune-up
 - MANE-VU (low sulfur fuel – 500 ppm)
 - adopt more stringent NO_x limits
 - purchase CAIR NO_x/SO₂ allowances
- Pollutants addressed: NO_x & SO₂
- NAAQS affected: Ozone, PM_{2.5}
- Still being evaluated by OTC



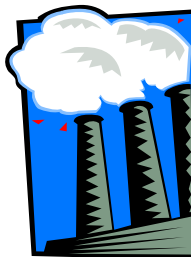
5. Industrial Surface Coatings

- Control Measure:
 - Amend existing State specific rules
 - Adopt more stringent limits
 - Lower applicability thresholds
 - Extend geographic coverage
- Pollutant addressed: VOC
- NAAQS affected: Ozone
- Still being evaluated by OTC



6. Glass Furnaces

- Control Measures:
 - Amend existing State specific rules
 - require “oxyfiring” at next rebuild
 - until then, purchase NO_x allowances
- Pollutant addressed: NO_x
- NAAQS affected: Ozone
- Reduction ~ 90%
- Still being evaluated by OTC



7. Petroleum Refineries

- Control Measures:
 - consent decrees (FCCUs & FCUs, boilers & process heaters and equipment leaks)
 - adopt more stringent VOC standards (flares, wastewater treatment)
- Pollutants addressed: VOC, NO_x, PM & SO₂
- NAAQS affected: Ozone, PM_{2.5}
- Model rules being prepared by MARAMA



8. Petroleum Aboveground Storage Tanks

- Floating Roof Tanks
- Control Measure:
Amend existing State specific rules
 - adopt new VOC standards (roof legs, degassing and cleaning operations)
- Pollutant addressed: VOC
- NAAQS affected: Ozone
- Still being evaluated by the Department



9. Diesel Compression Ignition Internal Combustion Engines

- **Control Measure:**
Amend existing State specific rules
 - lower applicability threshold
 - adopt more stringent emission standards
 - reduce sulfur content of fuel
 - factory-certified
- **Pollutants addressed: PM, NO_x, CO, VOC & SO₂**
- **NAAQS affected: Ozone, PM_{2.5}**
- **Still being evaluated by the Department**

Other Source Categories Under Review

- Publicly Owned Treatment Works
- Printing and Graphic Arts
- Metals Production

Next Steps

- Regional groups to write model rules where appropriate
- Draft SIP Revisions
 - State commitment to adopt regional measures/revise State RACT rules
- Public Hearing
- Submit RACT requirements for 8-hr Ozone SIP Revision to EPA
 - Committal SIP first
 - RACT rules second

<http://www.state.nj.us/dep/airworkgroups/2006update.html>

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The NJDEP welcomes public feedback on this and any white papers through June 16, 2006.