

2010 Clean Air Plan

Chapter 4

Emission Control Measures

April 14, 2010 CAC Meeting

Overview

- The 2010 Clean Air Plan (CAP)

Fulfills the state triennial plan “assessment and update” requirements (there are no federal maintenance plan provisions included in the 2010 CAP - see the 2007 CAP for these).

- Chapter 4, Emission Control Measures

Assesses past rulemaking activities and provides strategies for future rulemaking actions.

Local Control Measures

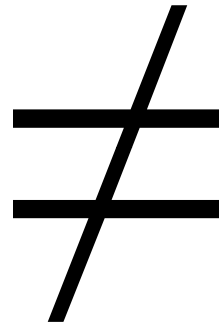
- **Adopted** (Board-Approved Rules)
Table 4-1 (< 2007), Table 4-2 (2007 - 2009)
- **Proposed** (Maintaining the 1-Hour Ozone Standard & Attaining the 8-Hour Ozone Standard) Table 4-3
- **Further Study** (Feasibility Analysis Needed) Tables 4-4 and 4-5

State-Wide Control Measures

Table 4-6

ARB-Adopted Techniques Control Emissions from:

- Motor Vehicles
- Off-Road Equipment
- Consumer Products
- Fueling Operations
- Other Miscellaneous Sources and Operations



EVERY FEASIBLE
MEASURE

NO_x CONTROL MEASURES

1. Proposed Amended Rule (PAR) 352 - Residential Water Heaters,
< 0.075 MMBtu/hr
2. PAR 360 - Combustion Equip't,
≥ 0.075 MMBtu/hr to ≤ 2 MMBtu/hr
3. PAR 361 - Combustion Equip't,
> 2 MMBtu/hr to < 5 MMBtu/hr
4. PAR 342 - Combustion Equip't,
≥ 5 MMBtu/hr

ROC CONTROL MEASURES

1. PAR 321 - Solvent Cleaning Machines and Solvent Cleaning (currently underway)
2. PAR 330 - Coating of Metal Parts and Products
3. PAR 337 - Coating of Aircraft or Aerospace Vehicle Parts and Products
4. PAR 351 - Coating of Wood Products
5. PAR 349 - Rule Polyester Resin Operations
6. PAR 353 - Adhesives and Sealants
7. PAR 354 - Graphic Arts
8. PAR 323 - Architectural Coatings
9. PAR 321 - Solvent Cleaning Machines and Solvent Cleaning (e.g., 50 gr/l → 25 gr/l)

NEWLY PROPOSED CONTROL MEASURES

1. PAR 360 - Combustion Equip't,
 ≥ 0.075 MMBtu/hr to ≤ 2 MMBtu/hr
2. PAR 361 - Combustion Equip't,
 > 2 MMBtu/hr to < 5 MMBtu/hr
3. PAR 342 - Combustion Equip't,
 ≥ 5 MMBtu/hr
4. PAR 321 - Solvent Cleaning Machines
and Solvent Cleaning (e.g., 50 gr/l \rightarrow 25
gr/l)

PROPOSED CONTROL MEASURES FOR COMBUSTION EQUIP'T (ONE CARRY- OVER & THREE NEWLY PROPOSED)

Rule 352 - Residential Water Heaters, < 0.075 MMBtu/hr, new limit: 15 ppmv NO_x. The rule is a point of sale-type rule.

Air District Rule Used as a Model

South Coast AQMD (SC) Rule 1121, Control of Nitrogen Oxides from Residential Type, Natural-Gas-Fired Water Heaters

Rule 360 - Combustion Equipment, ≥ 0.075 MMBtu/hr to ≤ 2 MMBtu/hr, new limit: 20 ppmv NO_x, may have higher limits for pool heaters, etc. The rule is a point of sale-type rule.

Similar Rules in Other Air Districts

- 1 SC Rule 1146.2, Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters
- 2 SJV Rule 4308, Boilers, Steam Generators, and Process Heaters - 0.075 MMBtu/hr to Less than 2.0 MMBtu/hr

NEWLY PROPOSED CONTROL MEASURE FOR COMBUSTION EQUIPMENT

Rule 361 - Combustion Equipment, > 2 MMBtu/hr to < 5 MMBtu/hr, new limits: 12 ppmv NOx for atmospheric units & 9 ppmv NOx for nonatmospheric units, may have higher limits for thermal fluid heaters, etc.

Similar Rules in Other Air Districts

1 SC Rule 1146.1, Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters

2 SJV Rule 4307, Boilers, Steam Generators, and Process Heaters - 2.0 MMBtu/hr to 5.0 MMBtu/hr

Low Usage Cut-off

1.8 Billion
Btu/Year

5.0 Billion
Btu/Year (until 06-30-2015), 1.8
Billion Btu/Year
(on and after 07-01-2015)

NEWLY PROPOSED CONTROL MEASURE FOR COMBUSTION EQUIPMENT (cont.)

Rule 342 - Combustion Equipment, ≥ 5 MMBtu/hr, new limits:
In general, 9 ppmv NO_x for natural gas-fired units & 15 ppmv
NO_x for oilfield steam generators, may have higher limits for
other units burning non-PUC quality natural gas.

Similar Rules in Other Air Districts

- 1 SC Rule 1146, Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters
- 2 SJV Rule 4306, Boilers, Steam Generators, and Process Heaters - Phase 3

Low Usage Cut-off

9 Billion Btu/Year

RECENT REVISION

- Table 4-3 change.
- References to attaining the 1-hour standard revised to maintaining it.
- Added “thermal fluid heaters” in the discussions on PARs 342 and 361
- Other minor changes.

QUESTION AND COMMENT PERIOD