

RECLAIM



Working Group Meeting

August 12, 2004



Today's Meeting

- Updates
 - BARCT Determinations
 - Cost-effectiveness
- Staff proposal
- White Paper
- Options for programmatic RTC reductions
- Open discussion
- Schedule



Updates

- New BARCT emission factors for Rule 1146/1146.1 boilers and heaters
 - Based on San Joaquin Valley Unified APCD Rule 4306
 - 12 ppm for ≤ 20 mmBtu/hr
 - 9 ppm for > 20 mmBtu/hr
- Revised cost-effectiveness
 - \$8,900/ton based on 10 year life and new emission factors
- Revised control factor for Rule 1134



Staff Proposal

- Reductions
 - AQMP method
 - 10% adjustment for imperfect market performance
 - 7.0 tons
 - Straight-line rate of reduction (2006–2010)



Staff Proposal (continued)

- Price triggers
 - Based on 12-month rolling average RTC price
 - Program review if RTC price exceeds \$15,000/ton
 - Last year RTC reductions become tradable if RTC price exceeds \$15,000/ton in CY 2010



Staff Proposal (continued)

- Potential Exemptions from Reductions
 - 1994 allocations = 2000 allocations
 - End factors for equipment categories \leq to new BARCT
 - Only applicable to original RTCs, not additional holdings
 - Minimal potential impacts



Staff Proposal (continued)

- SIP

- Initial 4 years reductions submitted
- Last 1 years held back for use if price exceeds \$15,000/ton
 - May consider SIP submittal after 24 months of implementation if price < \$15,000/ton



White Paper

- Format

- Introduction
- Requirements
- Issues

- Background
- Viewpoints
- Discussion
- Staff Recommendations



White Paper (continued)

- Key issues
 - BARCT technology evaluations
 - Cost-effectiveness
 - RTC reductions
 - Reduction options



BARCT Determinations

- New BARCT

- Rule 1146 and 1146.1 boilers and heaters;
- Rule 1109 refinery boilers and heaters;
- Fluid catalytic cracking units;
- Metal melting and heating processes; and
- Miscellaneous combustion equipment including ovens, kilns, calciners, dryers, and furnaces



BARCT Determinations (Cont.)

- No New BARCT
 - Gas turbines;
 - Cement kilns;
 - Internal combustion engines;
 - Glass melting furnaces; and
 - Curing and drying ovens



Cost Effectiveness

- LCF vs. DCF
- Equipment life
- Cost threshold



LCF vs. DCF

- Recommend continued use of DCF
- Consistent with past practice (for comparisons)
- Better for dealing with:
 - Non-constant O&M
 - Costs occurring longer than 1-year intervals (e.g. catalyst replacement)
 - Non-uniform emission reductions over project life
- LCF to be provided for informational purposes



Equipment Life

- 10-year life historically used
- Appropriate in most applications, not all
- Underestimates cost-effectiveness where equipment has much longer life expectancy (e.g. SCR)



Equipment Life (Cont.)

- Recommend use of varying equipment life, as appropriate
- Equip. manufacturers and industry use longer life in own calculations



Cost Threshold

- Background

- AQMP CMB-10 (RECLAIM): \$7,500/ton
- VOC Rules: \$13,500/ton threshold
- BACT: \$19,100/ton threshold
- BACT: \$57,200/ton (incremental only)
- Rule 2015: \$15,000 program evaluation



Cost Threshold (Cont.)

Cost Effectiveness of AQMD Rules and 2003 AQMP Control Measures

Cost Effectiveness	
\$9,900	Average
\$6,600	Standard Deviation
\$12,900	60 Percentile
\$14,300	75 Percentile
\$17,800	90 Percentile
\$20,200	95 Percentile



Cost Threshold

- Recommend:
 - No upper limit for cost-effectiveness
 - Examine on equipment category basis
 - Accounts for equipment sizing and available resources



RTC Reductions

- Key Issues
 - Method
 - Amount
 - Timing



Method

- AQMP
 - 1997 inventory
 - 2003 AQMP growth
 - BARCT control factors
 - 10% Adjustment
- Allocation
 - Peak year emissions
 - Tier I vs. New BARCT



Method (continued)

- Market Driven
 - RTC price is surrogate for BARCT
 - 3 ton per day reduction 2007 – 2010
 - With each AQMP look at last 2 years' RTC prices
 - If average RTC price < \$15,000/ton, 1 ton reduction after 1 year lead time



Amount

- AQMP Method
 - 7.0 tpd reduction
 - Includes 10% adjustment for market uncertainty
 - 2006 - 2010
- Allocation Method
 - 5.4 tpd reductions
 - 2006 - 2012
- Market-Driven
 - 3 tpd reductions suggested
 - 2007 - 2010



Reduction Options

- Across-the-board
- AQMD/private AQIP
- Source category- or facility-specific
- Issues
 - Activity levels
 - Holdings vs. emissions



Next Steps

- Rule 2007 September Public Hearing
- September Informational Hearing
- Working Group Meeting - TBD
- Remaining Rules
 - Set Hearing - October
 - Public Hearing - November