Public Consultation Meeting for Proposed Amendments to Regulation XX - RECLAIM

August 12, 2004

Purpose of This Meeting

- Summarize the proposed amendments
- Seek additional public input

Background - RECLAIM

- Adopted 1993
- Multi-Industry cap & trade program
- Replaced rules & control measures with facility caps & declining balance
- Applied to facilities over 4 tpy NOx or SOx
- ~ 330 facilities in the NOx program
- ~ 35 facilities in the SOx program

Background - RECLAIM, cont.

- Facilities have many options
- ~70 tons per day reduced from 1994 to 2003
- RTCs =1 pound per year, valid for 12 months
- 2 cycles – calendar & fiscal year
- Quarterly & annual reconciliation

Program Performance

- Except for power crisis, high rates of compliance & low credit prices
- 2000/2001 Power Crisis
  - Large increase in electricity production
  - Heavy demand on credits & increase in prices
- May 2001 amendments addressed
- Stable since then

RTC Availability

- RTCs in market = 34.2 Tons Per Day (50% held by power plants & refineries)
- Year 2002 = 30 tons per day
  Year 2003 = 29 tons per day (estimated)
- Power plants have added BARCT and BACT
  - Projected excess of ~3 tons per day
- Feasible controls for many equipment
- 15-20% unused RTCs (except for energy crisis)

Proposed Amendments

- 2003 AQMP commitment
- State law requirements
  - BARCT determination
  - Equivalent to command & control

BARCT Background

- Emission limit with technology & cost considered
- Applies to NOx
- AQMP SIP commitment = 3 tons/day
- Actual amount depends on technical & economic feasibility

Criteria Considered for New BARCT

- AQMD rules
- Other APCD or AQMD rules are more stringent
- Achieved in practice with retrofits
- Technology available & feasible for retrofits
- Manufacturer guarantees

Criteria Considered for New BARCT, cont'd

- Cost effectiveness
- Emission reduction potential
- Command & control rule would be proposed in the absence of RECLAIM

BARCT Analysis

- Comprehensive review of each category
- No new BARCT for several categories
- New BARCT for many categories
- Technologies
  - Low NOx burners
  - SCR

Proposed Amended Rules

- Rules 2002, 2009, 2010, 2011, and 2012
- Rule 2015 amended in June 2004
  - Equipment breakdowns
- Rule 2007 scheduled for September 3, 2004
  - Continue power plant trading restrictions contingent on BARCT analysis

PAR 2002 (continued)

2010 RTC Holding Adjustment

- Emission reductions for all RTC holders
- Programmatic basis
- Implemented over a five-year period
- Reductions 2006 – 2010, equal increments each year
- Exact percentage subject to the BARCT analysis

PAR 2002 (continued)

Emission Factor for Micro-Turbines

- Administrative change to Table 1
- Current default factor is 413 pounds per million standard cubic feet (lbs/mmscf)
- Proposed factor is 54.4 (lbs/mmscf)

PAR 2009

- Environmental Dispatch removed
- Current compliance plan expires at the end of the 2005 compliance year
- Change sunset date to the date of rule amendment

PAR 2010

- Clarification on deductions for quarterly exceedances
- Add quarterly exceedances to calculate total annual exceedance
- Deduct annual exceedances

PAR 2011 and 2012

- Consistent due date for monthly interim reports = 15 days
- Testing procedures for natural gas combustion sources with O_2 content greater than 19%
- RATA schedule for periodically operated equipment
- Typographical corrections
- Allow web-based reporting

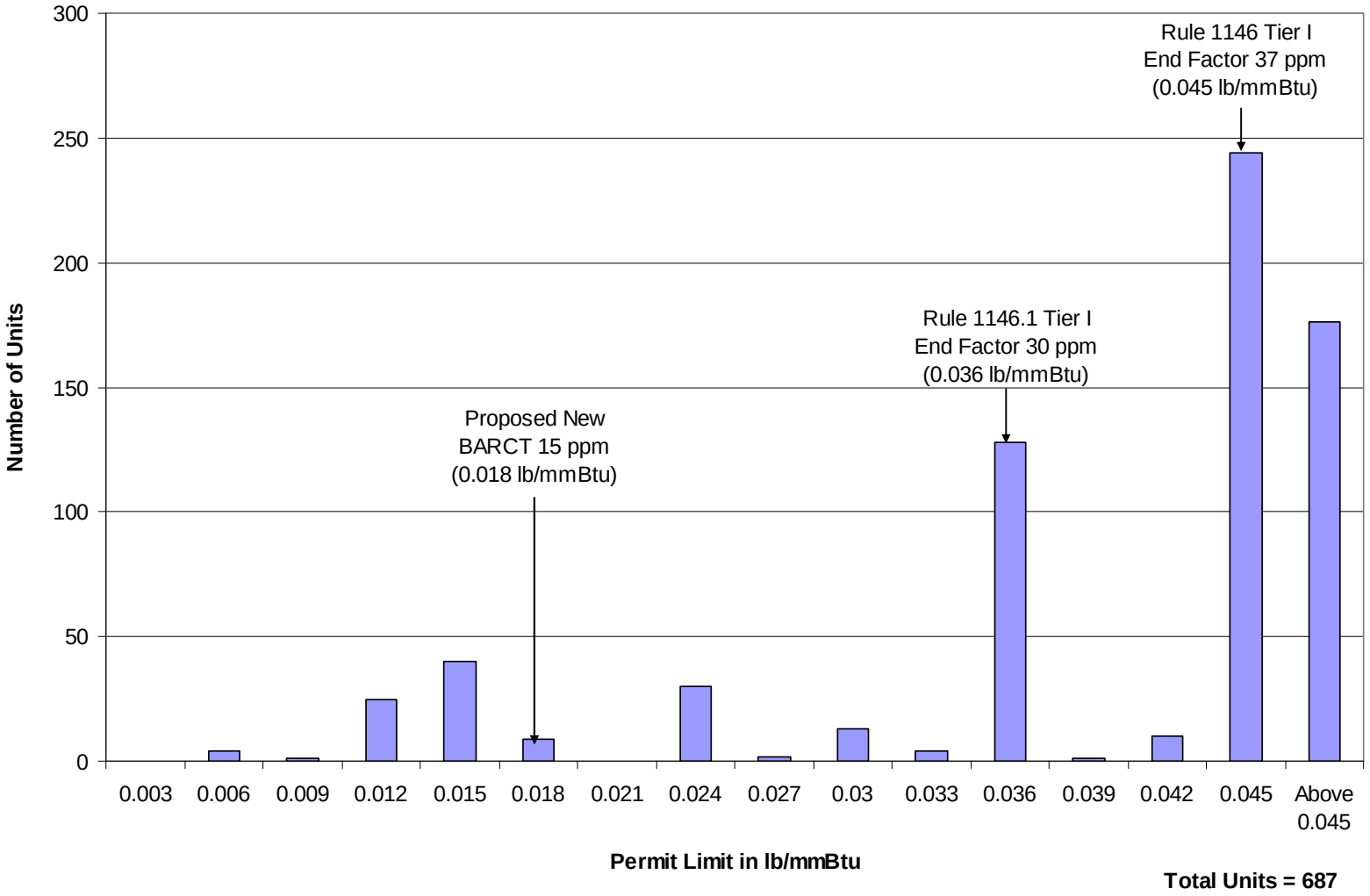
Key Issues

- BARCT technical 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

Rule 1146/1146.1 Boilers/Heaters



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

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

RTC Reductions

- 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

Staff Proposal

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

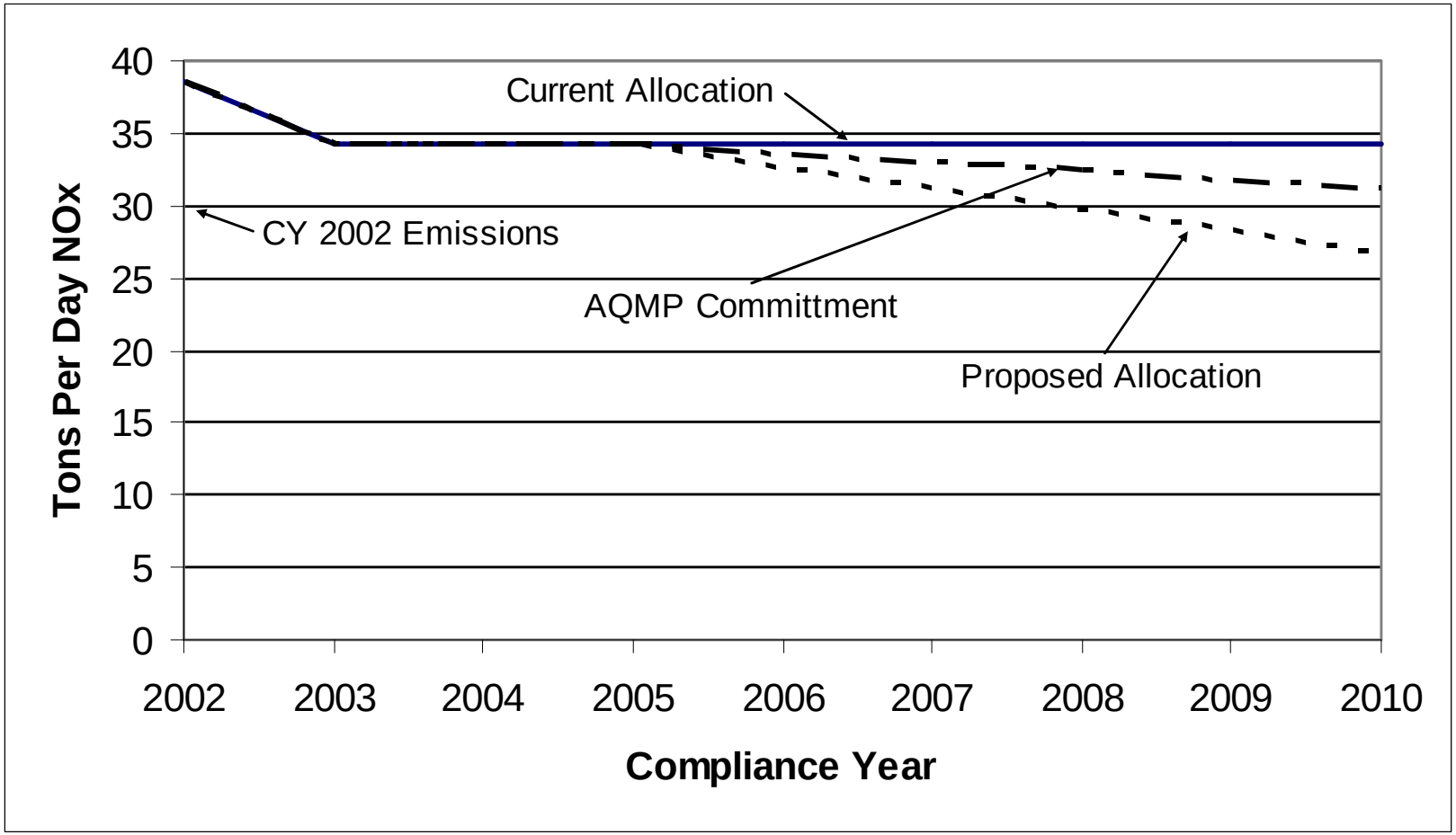
Staff Proposal (continued)

- 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
- SIP
  - Initial 4 years reductions submitted
  - Last 1 year held back for use if price exceeds $15,000/ton

Staff Proposal (continued)

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

Reductions Over Time



Reduction Options

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

Next Steps

- PAR 2007 – continue power plant trading restriction beyond September 1st until BARCT review
- Continue to work with stakeholders & other agencies
- Three consultants hired to advise staff on market implication of various options

Schedule

- August 27 – close of comment period
- September 2004 - Board Meeting
  - Rule 2007 Public Hearing
  - White Paper on RECLAIM key issues and Informational Hearing on RECLAIM
- Set October for November Public Hearing

LCF vs. DCF

Item	DCF	LCF*
Time Horizon	Treats all costs as if they were paid in the initial year	Looks at the capital costs as if they were paid like a home mortgage
Payment Method	Provides the cost today to pay for a steady stream of expenditures	Paying overtime with interest
Methodology	Discounts the future costs back into the amount that would be needed to set aside now (based on the rate of interest) to fund the future costs as they occur	Provides the amount needed in each future year if the up-front capital costs are paid for in equal annual installments

* LCF yields results 20% – 30% higher than DCF.