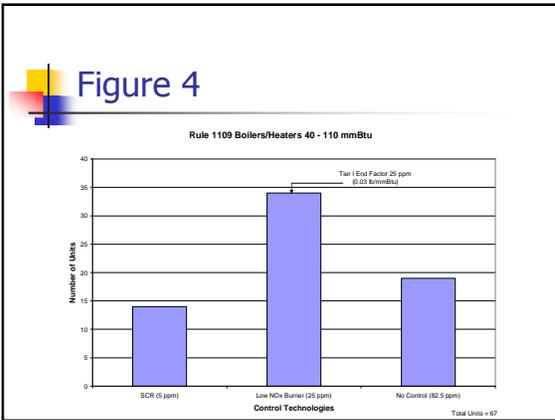
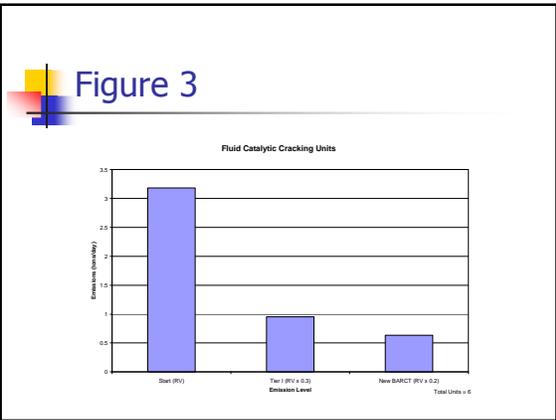
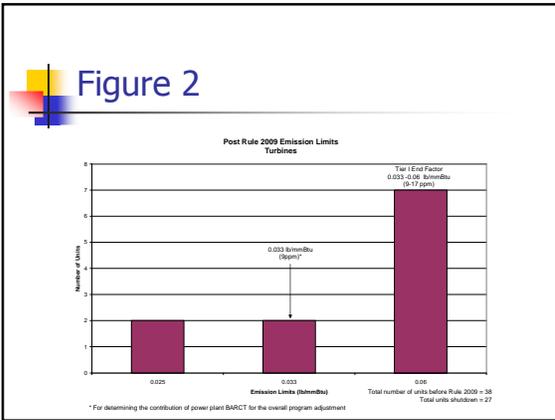
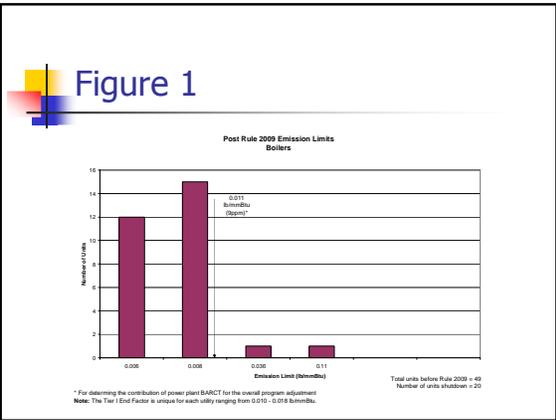
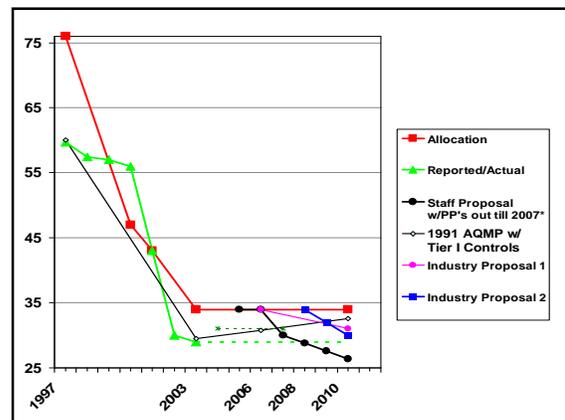
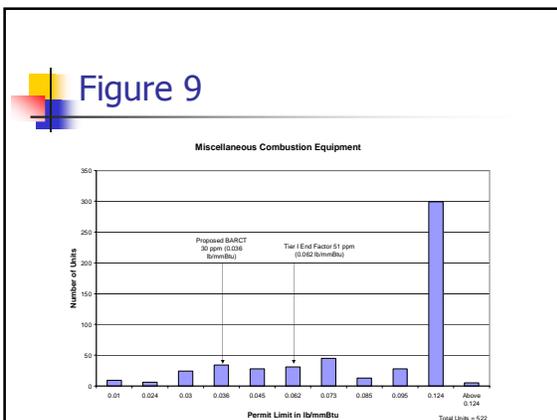
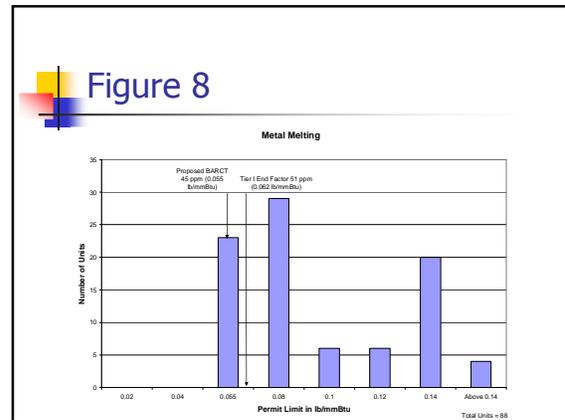
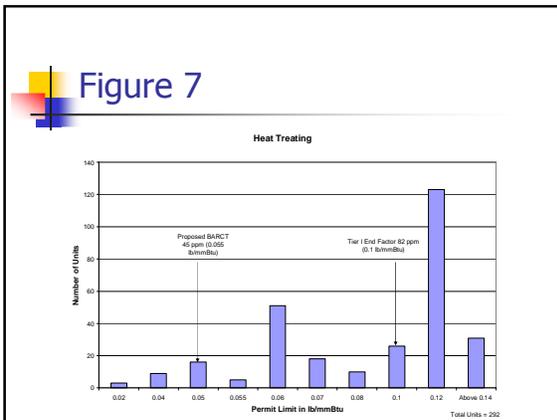
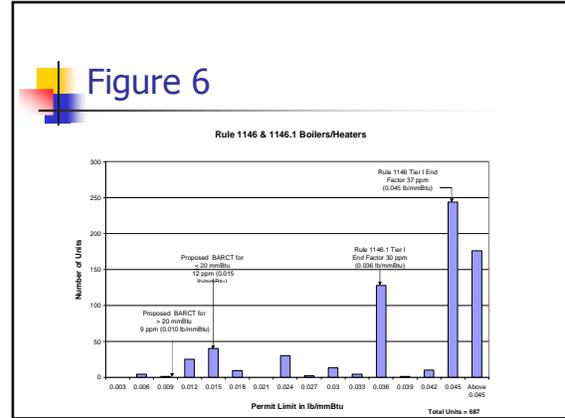
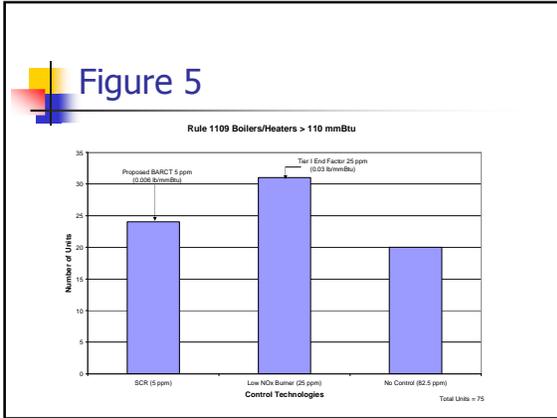


RECLAIM Working Group Meeting

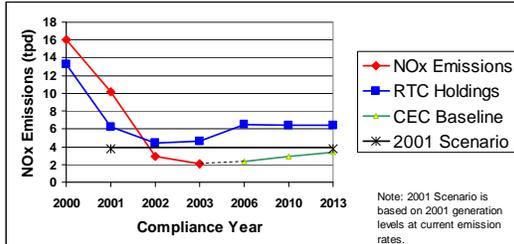
September 10, 2004

- ## Today's Meeting
- White Paper
 - BARCT evaluation
 - RTC reductions
 - October Board meeting
 - Key issues
 - Staff recommendations
 - Summary of Economist's Reports
 - Open discussion
 - Schedule

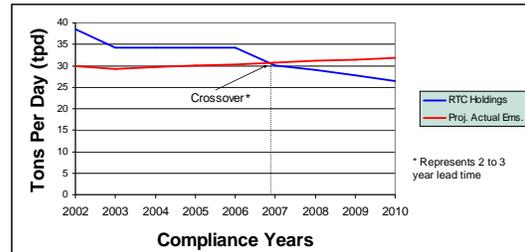




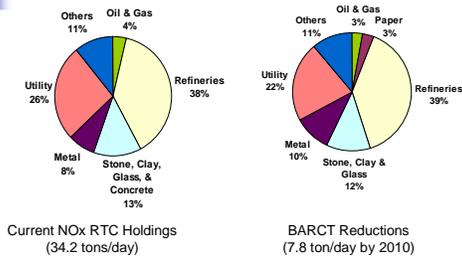
Rule 2009 Power Plant Historical and Projected Emissions



Projected Crossover of RTC Holdings = Actual Emissions



RECLAIM NOx RTC Holdings & BARCT Reductions Contribution by Industry



Key Issues

- Cost effectiveness
 - Equipment Life
 - Cost Threshold
 - LCF vs. DCF
- Amount of reductions
- Timing
- Shaving options
 - "Structure Buyers"
- Power plant reentry

Legal Requirements

- State Law
 - Command-and-control equivalency
 - BARCT Implementation
 - All feasible measures
- 2003 AQMP
 - 3.0 tpd
 - "Black box"

Staff Screening Analysis

Option	State Law Requirements			AQMP	
	BARCT	C&C	All Feasible	Short Term	"Black Box"
1	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y
3	N	Y?	N	Y	Y
4	N	N	N	Y	Y
5	N	N	N	Y	N
6	N	N	N	Y	Y
7	N	N	N	?	?
8	Y	Y	Y	Y	Y

Option 1: 2-phase 7.8 tpd with powerplants restricted until 2007
 Option 2: 2-phase 7.8 tpd with 2005 shaving for power plants
 Option 3: Low-NOx burner technology only without 10% market adjustment (7.4 tpd)
 Option 4: Low-NOx burner technology only with 10% market adjustment (4.7 tpd)
 Option 5: 3 tpd reduction
 Option 6: 4 tpd reduction
 Option 7: Hybrid - C&C/Market (<7.8 tpd)
 Option 8: Command and Control - 7.8 tpd

Performances Screening

Option	Shaving Method	Reductions		Costs	Job Impacts	Market Stability	"Structure Buyers"	Energy
		Timing	Amount					
1	Uniform							
	Equipment-based							
	Uniform/Capping Limits							
2	Uniform							
	Equipment-based							
	Uniform/Capping Limits							
3	C&C							

Summary of Anil Puri's Analysis of Market Impacts of 2004 RECLAIM Amendments

Report Prepared for SCAQMD
By Anil Puri
Dean of Business School
Cal State Fullerton
Presentation prepared by SCAQMD Staff

- ### RTC Reduction Rate
- Annual RTC reduction at 12.1% between 1994 and 1999
 - Proposed annual reduction rate at 4.4% from 2006 to 2010

- ### Emission Trend
- Steady decline in emissions between 1994-1999 despite strong job growth
 - Future emissions expected to rise after the 2001-2003 slowdown
 - Unexpected events (e.g., energy crisis) difficult to forecast
 - Dr. Puri calculated future emissions projections using a 5-year moving average

- ### Future RTC Market
- Rate of decline in emissions smaller than for RTCs between 2006 – 2010 (Figure 3-1)
 - Upward pressure in RTC prices expected compared to 1994 – 1999
 - Although excess demand for RTCs may push up prices, increases should still be far short of \$15,000/ton

- ### Price Stabilizing Forces
- Price trigger to allow the release of last year's emission reductions into the market
 - Re-entry of power plants
 - Increase market size and efficiency
 - May provide cheaper emission reduction technologies
 - Other unexploited emission reduction technologies



Other Recommendations

- Potential for emission reductions from other untapped sources to bring future stability to the market and keep RTC prices low
- Currently proposed reductions could be applied selectively based on lower costs and greater reduction potential as opposed to across-the-board reductions
- Opt out of RECLAIM option may result in additional emission reductions in exchange for a smaller and tighter market as facilities take RTCs out of the market



Preliminary Conclusions of Polenske/Mahdavi Analysis of Market Impacts of 2004 RECLAIM Amendments

Report Prepared for SCAQMD
By Karen Polenske and
Ali Shirvani-Mahdavi, MIT
Presentation prepared by SCAQMD Staff



Polenske/Mahdavi Report Preliminary Conclusions

- Current RTC transactions are only a small portion of overall RTC market
- Participants will continue to look for internal solutions to emission demand needs and use RTC market as auxiliary solution
- Future BARCT adjustments and re-entry of power plants needs to be considered



Polenske/Mahdavi Preliminary Conclusions (continued)

- Need to consider incremental re-entry or percentage of power plant emissions back into the market
- Incremental re-entry more cost-effective than percentage option



Schedule

- Mid-September: CEQA
- Early November: Socioeconomic Analysis
- Economist Reports
 - Puri – completed
 - Polenske – 9/11/04
 - Harrison - ?
- Rulemaking: 12/04 earliest



Staff Proposal

- Consistent with Design Requirement to Match Command & Control, Used for Reductions from 2000 to 2003
- Uses Data from 2003 AQMP
- 1997 Actual Emissions x Growth Factors x New BARCT
- Yields 7.8 tpd Reduction, Including a 10% Compliance Margin

Staff Proposal (cont.)

- 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 (Cont.)

- 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
- Leave Power Producers out until 2007

Staff Proposal (cont.)

- SIP
 - Initial 3 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

Reduction Options

- Across-the-Board
 - AQMD/Private AQIP
- Source Category- or Facility-Specific
- Issues
 - Activity Levels
 - Holdings vs. Emissions

