RECLAIM Working Group Meeting

April 1, 2004

BARCT

- Requirement of state law H&SC §40440
  - Takes into consideration environment, energy, & cost
  - Equivalency Test
    - New and existing sources
    - Power plants
- Equivalency to command-and-control required pursuant to H&SC § 39616
  - Emission Reductions
    - Emission Rates
    - Activity Levels

BARCT Methodology

- Every feasible measure (H&SC §40914)
- Review of several information sources:
  - ARB
  - EPA
  - AQMD and other district rules
  - Manufacturers
  - Permit Data

Categories with No Further NOx Reductions Proposed

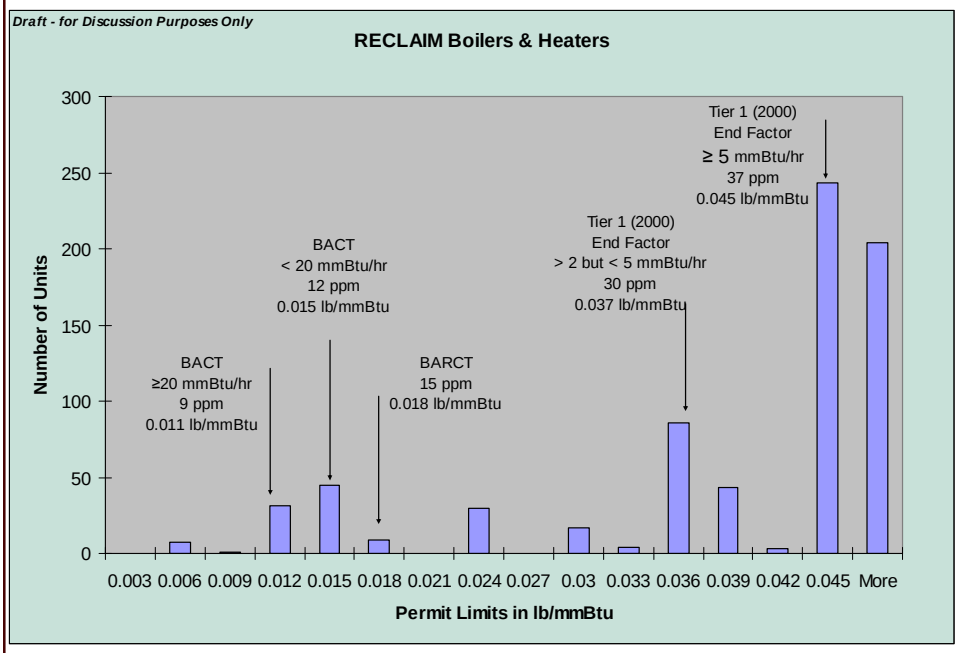
- Curing and drying ovens
- Glass melting furnaces
- ICEs
- Cement kilns

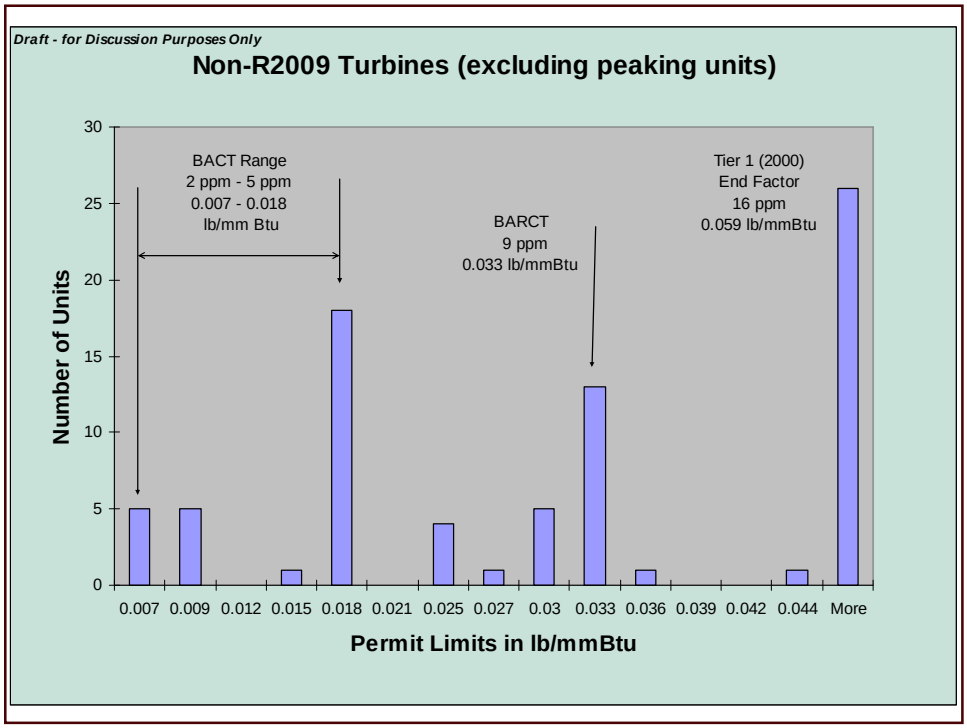
Preliminary Results Only

Categories Identified with Potential Further NOx Reductions

- Turbines (non-Rule 2009 facilities)
- Boilers & heaters
- Metal melting furnaces
- Metal heat treating
- FCCU
- Misc. (ovens, kilns, calciners, dryers, furnaces,etc.)

Preliminary Results Only





Summary of Subsumed Rules, Control Measures, RECLAIM Factors and Proposed BARCT*

Subsumed Rule-CM	Rule-CM Description	Tier I Emission Factor	Tier I Emission Factor Units	Basis for BARCT	New Proposed BARCT (lb/mmBtu)	Control Technology
90A-C-5	Misc. Combustion (Furnaces, Kilns, Ovens, Dryers)	0.062	LB/MMBTU	Manufacturer Information, Permit Data for Retrofit	0.036 (30 ppm)	LoNOx Burner
90P-B-2	Petroleum Refinery FCC Units	70% reduction	LB/1000BBL	Permit Data for Retrofit	1.439	Proc Mod/SCR
90P-C-5	Metal Melting Furnaces	0.062 to 0.162	LB/MMBTU	Manufacturer Information, Permit Data	0.055 (45 ppm)	LoNOx Burner
R1109	Refinery Boilers and Heaters	0.030	LB/MMBTU	Manufacturer Information, SJVAPCD, Permit Data for Retrofit	>110 mmbtu 0.006 (5 ppm) < 110 mmbtu 0.018 (15 ppm)	LoNOx Burner
R1134	Gas Turbines	0.059	LB/MMBTU	SJVAPCD, Permit Data for Retrofit	0.033 (9 ppm)	Comb Mod/SCR
R1134	Gas Turbines at Rule 2009 Facilities	0.059	LB/MMBTU	SJVAPCD, Permit Data for Retrofit	0.033 (9 ppm) to 0.060 (17 ppm)	Comb Mod/SCR
R1134	Peaking Units				TBD	
R1135	Electric Power Generating Systems (Rule 2009)	0.015 to 0.018	LB/MMBTU	Permit Data for Retrofit	0.010 (9 ppm)	SCR
R1146	Boilers and Heaters ≥ 5MM Btu/hr	0.045	LB/MMBTU	Manufacturer Information, SJVAPCD, Permit Data for Retrofit	0.018 (15 ppm)	LoNOx Burner
R1146-1	Boilers and Heaters 2-5MM Btu/hr	0.038	LB/MMBTU	Manufacturer Information, Permit Data for Retrofit	0.018 (15 ppm)	LoNOx Burner
Rule 1146-2	Boilers and Heaters <2MM Btu/hr	RV	LB/MMBTU	Manufacturer Information, Permit Data for Retrofit	0.018 (15 ppm)	LoNOx Burner

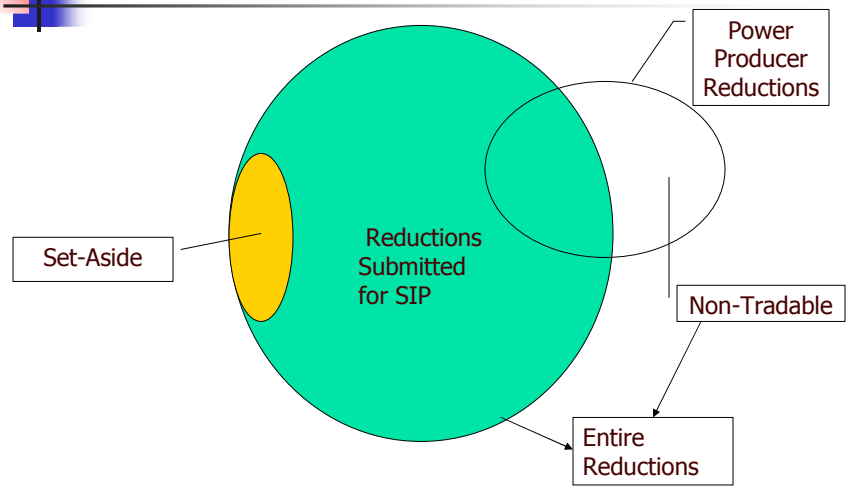
* Proposed BARCT under evaluation, cost-effectiveness analysis may alter recommendations.

Other Sources

- Heat Treating
- Metal Melting
- FCCU
- Rule 2009 Power Producers
- Misc. Combustion (i.e., ovens, dryers, furnaces, calciners, kilns)

NOx Reduction Approaches

Overview



Ongoing Data Analysis on Allocations

- RECLAIM Allocation Methodology
  - Comparison of BARCT to Tier I factors
  - Peak year equipment for 2000 allocations
  - Application of new BARCT factors to peak year activity as 2010 emissions
  - Comparison between 2010 emissions and 2010 allocations

Ongoing Data Analysis on Allocations (Cont.)

- 2003 AQMP to 2010 Ending Emissions
  - 1997 actual emissions
  - Application of growth and control factors to 2010 based on new BARCT factors
  - Comparison between 2003 AQMP 2010 ending emissions and RECLAIM 2010 calculated emissions

Discussion Points

- What is the appropriate action ($/ton or other) level to activate the "set-aside"?
- How to formulate a market-driven program which demonstrates BARCT equivalency?
- What is the appropriate level of unused RTCs (compliance margin) for the market?

Trend in Unused RTCs

Compliance Year	'94	'95	'96	'97	'98	'99	'00	'01	'02
% Excess RTCs	37	28	23	22	15	1.1	-19	-0.2	22

Schedule

- March 11 to April 9, 2004 - Notice of Preparation
- April 7, 2004 - Public Workshop
  - Auditorium, 1:00 – 4:00 p.m.
- April 15, 2004 Working Group
- April to June 2004 - Working Group Meetings
- July/August 2004 Public Hearing