



in balance

# AIR PERMITTING CONSIDERATIONS

## IMPLEMENTATION OF PRINCIPLES

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# Air Permitting Considerations

- ▶ PSD Projected Actual Test
- ▶ Performance Testing
- ▶ The Meeting

# PSD *Projected Actual* Test

- ▶ Historic PSD Evaluation
  - Major Source
  - Modification (Physical Change)
  - Past-Actual to Future-Potential Test
  - Low Utilization or Low Emission Units Penalized
  - “New” PSD Rules Utilize Projected Actual Test

## PSD *Projected Actual* Test

- ▶ 470 X 10<sup>6</sup> Btu/hr Heat Input Hogged Fuel Boiler Controlled by ESP
- ▶ Burns Wood and Natural Gas
- ▶ BACT Limits on PM, NOX, CO
- ▶ Project Physical Change does not Increase Capacity
- ▶ Construction Commences in 8 Months
- ▶ PSD Modification Test Indicates Project Significant

# PSD *Projected Actual* Test

- ▶ Potential – Actual = Emission Increase
  
- ▶ Potential Emissions (PTE)
  - BACT Limit: 0.05 lb/10<sup>6</sup> Btu
  - (BACT Limit) X (Capacity) = PTE = 103 tpy
  
- ▶ Past Actual (PA) Emissions
  - Chose 2004 – 2005 Calendar Year Period
  - (Actual Tests) X (Average Utilization) = PA = 56 tpy

# PSD *Projected Actual* Test

- ▶ Emissions Increase = PTE – PA
  - 103 tpy – 56 tpy = 47 tpy
  - PSD Significant Increase Level for PM = 15 tpy
  - Since 47 > 15 tpy, Significant
  
- ▶ Requires BACT and Modeling Analyses
  - BACT Analysis will Indicate Current Limits are BACT
  - Source has Modeled PM for PSD Impacts
  - Permit Application + Reviews > 12 Months

# PSD *Projected Actual* Test

- ▶ “New” PSD Rules Contain *Projected Actual* Test
  - *Shall exclude, in calculating any increase in emissions that results from the particular project, that portion of the unit's emissions following the project that an existing unit **could have accommodated** [CHBA] during the consecutive 24-month period used to establish the baseline actual emissions...and that are also unrelated to the particular project, including any increased utilization due to product demand growth;*
- ▶ Increase = [(Projected Actual) - (Actual)] – [(CHBA - Actual)]

# PSD *Projected Actual* Test

- ▶ Impact of Projected Actual on Estimated Increase
  - Projected Actual = PTE
  - Past Actual = Past Actual
  - CHBA = Capacity of Unit
- ▶  $[(\text{Projected Actual}) - (\text{Actual})] - [(\text{CHBA} - \text{Actual})] = 0 \text{ tpy}$

# PSD *Projected Actual* Test

- ▶ What is *Could Have Been Accommodated* (CHBA)?
  - Not Defined in the Rule
  - Discussed in Preamble
  - New Rule Means No Precedent or Guidance

# PSD *Projected Actual* Test

- ▶ What is CHBA, Example:
  - Grove Park Inn Capacity = 510 Rooms
  - CAPCA Attendees Spring 2006 = 408
  - Clearly, *Could Have Been Accommodated* < Capacity

# PSD *Projected Actual* Test

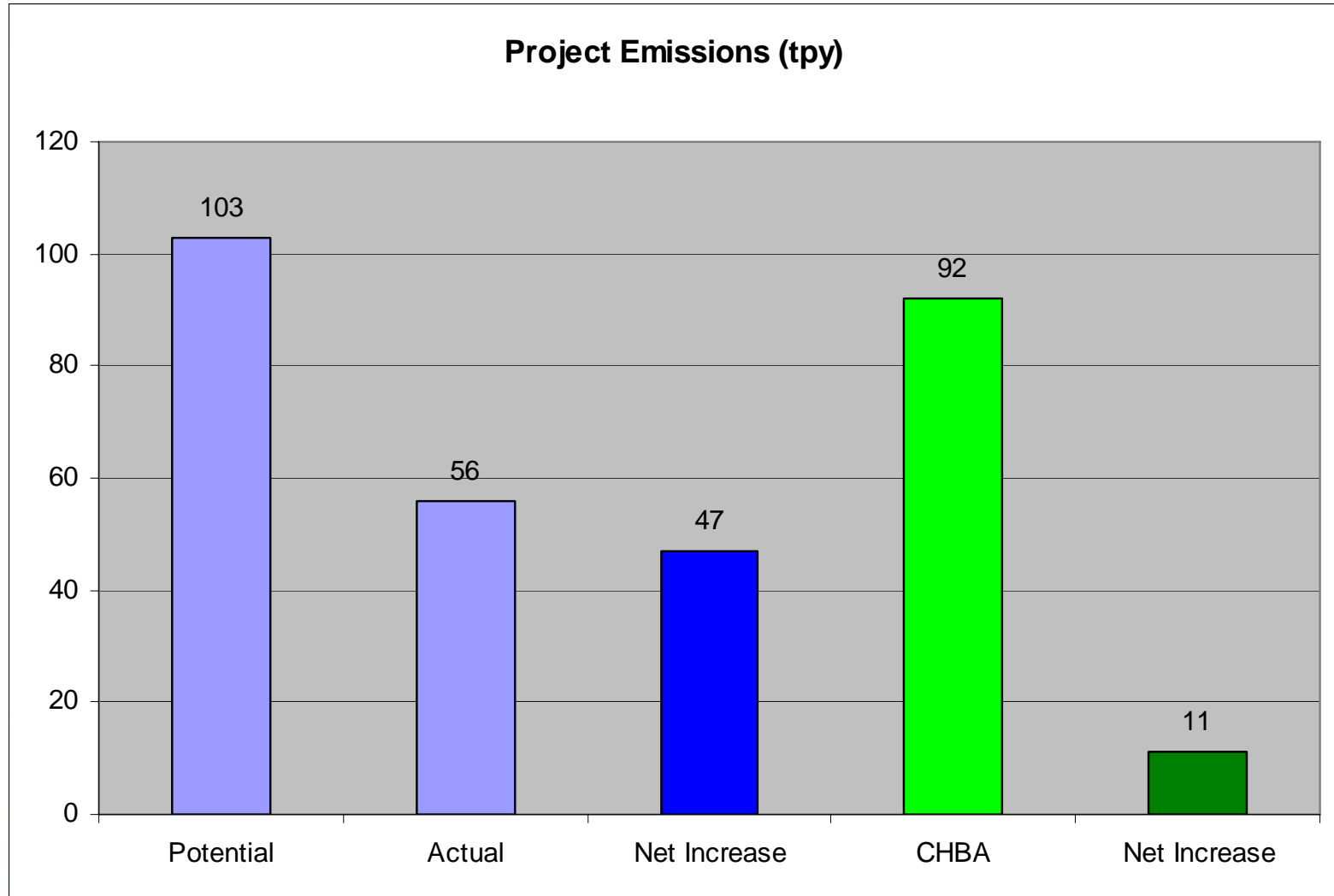
- ▶ How to Define CHBA:
  - ▶ A. Tell Mill Manager this is a “Complicated Issue”
  - ▶ B. Practice Singing and Try Out for *American Idol*
  - ▶ C. Research the Issue, Discuss Internally (at Length), Call Corporate, and/or Call an Attorney
  - ▶ D. Discuss with Agency (meeting)
  - ▶ C and D

# PSD *Projected Actual* Test

## ▶ Results:

- CHBA =
  - Monthly Maximum Actual Average Production
  - Actual Tested Emission Rate
  
- Project is not PSD Significant
  
- Projected Actual Permit Condition
  - Record Calendar Annual Emissions for Unit
  - Calculate Net Emission Increase
  - Report if Net Emission Increase above PSD Significance Level

# PSD *Projected Actual* Test



# Performance Testing

- ▶ Permit Limits VOC to 100 tpy and >99% Control Eff.
- ▶ Requested Removal of Control Efficiency Limit
- ▶ Renewed Title V Requires Testing within 180 days
  - Inlet & Outlet Must be Measured to Estimate Control Eff.
  - Directed to Address Testing Issues in Test Plan
- ▶ Testing Poses
  - Technical Challenges
  - Various Safety and Health Risks

# Performance Testing

- ▶ Four Individual Off-gas Vents to Thermal Oxidizer
- ▶ Above UEL but Flammable when Exposed to Air
- ▶ High Temperature
- ▶ May have Lethal Concentration of Hydrogen Cyanide
- ▶ Oxygen Deficient
- ▶ Vent is Impedance Heated
- ▶ May be Slightly Above Ambient Pressure
- ▶ Outlet of Thermal Oxidizer never Tested
- ▶ Production Rate Based on Product Line
- ▶ Agency in Transition

# Performance Testing

- ▶ Prepared Conceptual Test Plan
- ▶ Requested On-Site Meeting with Agency
  - Reviewed Process Vent Locations, Conditions, etc.
- ▶ Awaiting Response from Agency
- ▶ Submitted Test Plan after Acceptance of Concept
- ▶ Conducted Screening Test

# Performance Testing

- ▶ Conducted Performance Test
  - Not within Permit Required 180-Day Time Frame
  - Recorded Production Rate
  - Recorded Temperature
  - Results Indicate near Complete Destruction
- ▶ Developed Emission Factor Based on Production
  - On-going Compliance with Limit via Calculation
- ▶ No Enforcement Action
- ▶ May have Implications for Boiler MACT Testing Plans

# The Meeting

- ▶ Who to Invite?
- ▶ What to do BEFORE the Meeting?
- ▶ What to do / not to do DURING the meeting
- ▶ What to do AFTER the Meeting?