

**Summary of Climate Change
Workgroup
Focus on BACT for GHG**

**NACAA Spring Membership Meeting
May 16-19, 2010**

John Paul, OH
William O'Sullivan, NJ
Co-Chairs, NACAA NSR Committee

Report available at:

http://www.epa.gov/air/caaac/climate/2010_02_InterimPhaseIReport.pdf

Makeup of Workgroup

- 19 Industry
- 5 Environmental
- 10 state/local/regional/tribal agencies

State/Local Regional Workgroup Members

- Stephan Hartsfield – National Tribal Air Association
- Bill Becker – National Assn. of Clean Air Agencies
- Dennis McLean – Pudget Sound
- Jared Snyder – NY
- John Paul – Dayton, OH
- Laurel Kroack – Illinois
- Pravene Amar – NESCAUM
- James Goldstein – CARB
- Susana Hildebrand – Texas
- Bill O'Sullivan – NJ

EPA Response to Phase 1 Recommendations (GM 4/9/10 letter)

A. Specific EPA commitments

1. New ORD GHG Mitigation Strategies Database

2. RACT/BACT/LAER Clearinghouse enhancements

3. Sector based GHG control measures white papers

B. Goal - provide timely guidance to pave the way for a smooth transition to permitting of GHG

Schedule for Phase 2

- 4/29 - Kick off call
- 5/6 - Review background material
- 5/26 & 27 - CCWG, CAAAC (MEETING)
- 6/8 - Discuss issues
- 6/17 - Determine consensus/
non-consensus (MEETING)
- 6/24 - Review first draft of report
- 7/1 - Review 2nd draft of report
- 7/13 - Finalize report (MEETING)
- 7/16 - Send to CAAAC

EPA's 4/9/10 request for Phase 2 to focus on 2 areas

1. Energy efficiency –

How can the BACT process be used to encourage the development of energy efficient processes and technologies?

2. Innovative emissions reduction measures

How can the development and permitting of innovative emission reduction measures, including the promotion of inherently efficient and lower emitting processes and practices for GHGs, be encouraged? How can the Innovative Control Technology waiver be used or changed to better promote technology development and application?

8 White Papers provided to EPA for Consideration for a Phase 2 Workgroup Effort

1. Scope of applicability of PSD and BACT to GHG sources
2. Presumptive BACT
3. Use of Offsets in place of BACT
4. Netting amongst commonly owned or operated facilities, or a larger range of sources
5. ENCOURAGING INNOVATIVE CONTROL TECHNOLOGIES
6. EVALUATING ENERGY EFFICIENCY
7. Clean fuels
8. Ben Henneke's modest suggestions for the next 5 years

Draft List of Categories being used as examples for Phase 2 BACT EE Evaluation

1. Industrial gas-fired boilers
2. Gas-fired EGU peakers (simple cycle, combined cycle)
3. Major mod at a Coal-fired EGU
4. Natural gas pipeline compressors
5. Landfills
6. Pulp and paper industry

Data and Guidance Needs of State/Local Agencies

NACAA GHG BACT Workgroup

- Lisa Clarke, Colorado
- Carolina Espejel-Schutt, Minnesota
- Andrew M. Bodnarik, New Hampshire
- Arthur S. McDaniel, Knox County
- Tom Adams, Kentucky
- Christopher Clinefelter, Dayton
- Mohsen Nazemi, South Coast
- Jorge DeGuzman, Sacramento

Assumptions

- Agencies use existing SIP approved PSD review process
- We do not envision a new process for GHG BACT determinations
- Top-Down-BACT process is preferred
- Some form of the tailoring rule will be adopted by EPA

Communication

- Periodic GHG control measures newsletter is recommended
- Communication among EPA headquarters, the Regions, and State/Local agencies on permit decisions is essential
- RACT/BACT/LAER Clearinghouse and ORD GHG Mitigation Database must be readily accessible, timely, complete, and adequately staffed

Guidance Needs

- Appropriate methods for calculating costs
- Pollution prevention methods
- Efficiency improvement technologies
- Emissions factors (including fugitives)
- Bio-fuel effects
- Monitoring requirements, test methods, etc.
- Acceptable control technologies
- Ranking of GHGs with regard to impact
- Netting for GHGs under PSD rules
- Many more needs not listed here

Areas of Non-Consensus

- Appropriateness of New Source Performance Standards (primarily with regard to 111(d) standards for existing sources)
- Appropriateness of “Presumptive BACT” standards
 - Many state/local agencies have called for such standards, especially for smaller sources
 - Members are concerned such standards would conflict with the case-by-case mandate

Training

- Essential for all stakeholders
- Should be on both the process to be followed and the technical aspects of GHG controls
- National, Regional, State/Local level and periodic
- Must be timely and should communicate latest information to all parties

Subgroup Areas of Phase I Report

- I. Defining the source/scope of analysis
- II. Criteria for determining Feasible Control Technologies
- III. Criteria for Eliminating Technologies
- IV. Needs of States & Stakeholders
- V. Other (biomass, future availability of control)

I. Scope of BACT Analysis: Defining the Source

A. Consensus

- New or modified emission units

B. Non-Consensus

- Other portions of the production process (other than the emission unit)
- Scope of the terms
 - "source" and "facility"
 - "project"
- Meaning of the terms
 - "fundamental business purpose"
 - "basic design"

II. Criteria for Determining Feasibility Control Technologies

A. General Criteria Consensus (Partial List)

1. Expand RBLC to include:
 - Compliance test results
 - Operating Conditions
 - Foreign sources
2. Encourage innovative control technologies
3. Provide guidance on evaluating energy efficiency
4. Use 1990 Draft NSR Workshop Manual
5. Technology must be available in time frame of permit issuance.
6. Consider a control technology if applied to a similar chemical and physical exhaust gas stream

B. Demonstrated in Practice Consensus

- Used in production situation
- Successful at achieving claimed Performance
- Range of reasonably expected operating scenarios
- Commercial Scale

C. Technology Transfer Consensus

- Characteristics of the gas stream
- Comparability of production process
- Range of operating scenarios

D. Innovative Control Consensus

- EPA's provisions rarely used
- Consider other ways to promote new and innovative control measures

E. Carbon Capture and Sequestration (CCS)

- Need both capture and sequestration
- Site specific feasibility relevant for sequestration
- Size relevant
- Piping CO₂ to another site can be considered

F. Energy Efficiency

- Should be included in BACT analysis
 - To evaluate BACT alternatives
 - To set emission limits
- Must achieve desired production output
- Setting energy efficiency limits may not be feasible for some source categories
- BACT might be an equipment specification or operating procedure

G. Clean Fuels

- Should be considered (requirement of Act)
- No consensus on requiring cleaner fuels

III. Criteria for Eliminating Technologies

1. Consider impacts on criteria pollutants (can't cause/significantly contribute to NAAQS violation)
2. Consider other environmental impact, (i.e., water use)
3. Energy efficiency = multi pollutant reductions
4. Use carbon dioxide equivalents
5. Cost effectiveness values will be smaller per ton of pollutant

Next Steps

1. John Paul leading follow-up NACAA/EPA group on state/local GHG BACT needs
2. NACAA participating on phase 2 GHG BACT workgroup (energy efficiency and innovation).
3. NACAA following up with designated EPA staff on wider array of GHG implementation needs. See 3/17/10 follow up items from 2/4/10 NACAA-EPA retreat. (tailoring rule, resource needs, reporting rule, SIP credits for energy efficiency, and BACT)
4. EPA Goal - provide timely guidance to pave the way for a smooth transition to permitting of GHG