

# Biogenic CO<sub>2</sub> Emissions

## Case Studies – Responses to Charge Questions

### Charge Questions:

- 1) Does the SAB consider these case studies to be appropriate and realistic?
- 2) Does the EPA provide sufficient information to support how EPA has applied the accounting framework in each case?
- 3) Are there alternative approaches or case studies that EPA should consider to illustrate more effectively how the framework is applied to stationary sources?

### Team Members

Morton Barlaz, Chuck Rice, Steven Kelley, Richard Nelson

# Charge Question #1

Does the SAB consider these case studies to be appropriate and realistic?

- “Marginal at best” to “No” for case studies #1 - #4;
  - “real-world” scenarios need to be incorporated to serve as models for other situations
  - we will learn more about the utility of the framework by testing it in multiple unique case studies with “real world” data development and inclusion
- Case study #5 needs to be re-done/removed as it is unrealistic.

# Charge Question #2

Does the EPA provide sufficient information to support how EPA has applied the accounting framework in each case?

- Somewhat, but many values are single numbers across a wide region (e.g., the 1.5 tons of corn stover per acre across a “region”) and in some instances don’t really mirror real situations.
- Document does not address uncertainties and should develop examples from real data plus possible sensitivity analyses.
- More definitive wording statements is needed.
- Need accounting for co-products.

# Charge Question #3

Are there alternative approaches or case studies that EPA should consider to illustrate more effectively how the framework is applied to stationary sources?

- Land scale needs to be addressed with each feedstock. Regional is probably too big for most cases that involve a soil component.
- Perform additional case studies:
  - perennial herbaceous energy crop
  - annual energy/biomass sorghums
  - rotations with food and energy crops
  - different land and soil types
  - municipal solid waste
  - internal reuse of process materials

# Recommendations

## More Actual/Realistic Case Studies that:

- o Mirror “reality” with examples currently in practice.
- o Determine the “real” BAF across many different scenarios that mirror real agriculture/forestry situations (e.g., “slice and dice” a little more finely).