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Waste Reduction Model

Part II

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West Coast Climate Forum

July 9, 2009

How are WARM categories developed?

- Must identify available, peer-reviewed life-cycle with clear pathway(s)
  - Boundaries consistent with model
  - Comparative pathways for alternative scenarios
    - (e.g. making a can with recycled material and making a can using virgin material)
- Entire process usually takes 6-8 months

Current “Things to do” List

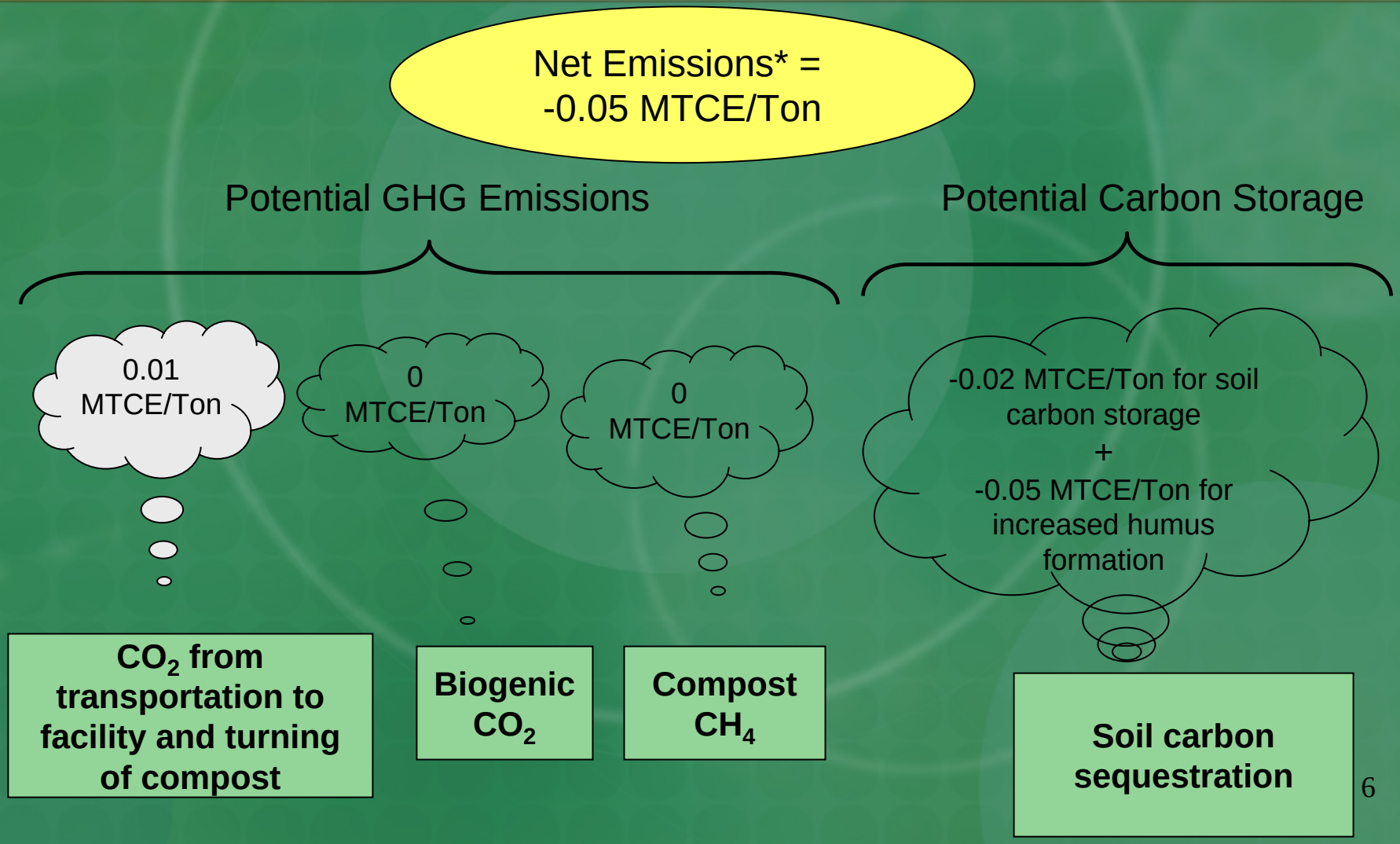
- Update benefit of composting
- Add additional C&D materials
- Improve user interface
- Implement regional energy grid factors (for landfill energy offsets)
- Add additional packaging materials??

Organics work

- Began last year with meeting of experts in the science of composting and landfills

- Recommendations for further investigation:
  - Material specific decay rates
  - Potential end uses and markets for compost
  - Modeling carbon storage potential of compost

Compost Emission Factor Breakdown



Material specific decay rates

- Decay rates for organic materials developed (Barlaz)
- Determining methodology for incorporating decay rates into model
- May be ready for next update, Fall 2009

Alternative methods

- Anaerobic digesters
  - Have data available from Canadian modeling exercise
- Alternative daily cover

Potential markets and end uses for compost

- Able to calculate GHG emissions from upstream production and manufacture of synthetic fertilizer
- Determining compost-fertilizer substitution rate
- Should be ready for next update, Fall 2009

C&D Materials

- New work to model C&D materials in WARM (pathways TBD)
  - Most likely added to model:
  - wood flooring
  - fiberglass insulation
  - More limited data, but can probably model:
  - vinyl flooring
  - asphalt concrete
  - asphalt shingles
  - ceiling tiles
  - drywall
  - structural steel
  - Insufficient data:
  - ceramic floor tile

Other GHG tools

- Reviewing all EPA GHG tools
  - Determining if background data is from consistent sources
- Work with modelers for outside-EPA whenever possible
  - WARM must maintain certain conditions that other tools may choose to exclude or change (see later slide on “Factors WARM team can not alter”)
- Please tell us about any tools that you work with that you think we should be familiar with

User interface

- Continuing the work on user interface
- Have a draft plan to make interface more user-friendly
  - More on page definitions
  - Layout of data entry
  - Additional graphic output to accompany summary report
  - Additional transport options (i.e. rail)
- Additional comments of how the model could be easier to use?

Factors the WARM team can not alter

- Global warming potential of methane (or any other gas)
  - This is set by UNFCCC reporting requirements which EPA must follow for national GHG inventories
- Remove any element of carbon storage or sequestration
  - Changes would need to flow through the same process as noted above

THANKS!

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