

# SWPS re Postclosure Care Reduction/Termination:



## Accomplishments and Future Plans

March 18, 2014

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Our vision is 'healthy Kansans living in safe and sustainable environments'.  
The state belongs to all of us - "Kansas Don't Spoil It"

# Presentation Items

1. **Outline** – Two PPP presentations:
  - a. First: Background and basis.
  - b. Second: Principles and needs of proposed methodology.
2. **Conduct of Presentation**
  - a. **Clarifying** questions are welcomed as we go along (AWGA).
  - b. **Detailed** comments/corrections/criticisms are welcomed following the presentation or via e-mail and/or in direct conversation.
3. **Acknowledgments** – Especially Charlie Bowers, Christine Mennicke et al.

# Accomplishments: Specifics

- **Project initiation:** August 17, 2010.
- **Project objective:** Identify a possible methodology to determine the possible end of postclosure care.
- **Scope of project:** Identify and evaluate the efforts of others (countries, states, consulting firms and academic institutions).
- Compile a list of references to support the proposed methodology.
- Recommend a methodology with Kansas examples .
- Prepare related policies, TGD and regulations.
- Archive the accumulated materials for future use.

# Summary of Methodology

The recommended methodology is based upon trend analysis of the emissions (leachate and landfill gas) over an extended period of time beginning in the active life of the landfill to closure and past closure to some point into postclosure care (PCC). The trend analysis will be validated by statistics to provide a numerical evaluation of the trend quality. **But, let's first look at lesser choices:**

# Other **Less Desirable** Approaches:

- Evaluate the MSW mass itself.
- Evaluate the MSW mass itself and the emissions.
- Use other methodologies published in the literature, e.g., the **ITRC/EREF methodology**.
- Or, the method proposed by the **State of Wisconsin**.

# Foundational Efforts to Develop Methodology:

- **Evaluated literature** (August 2010 to present).
- **Proposed methodology based on literature and known scientific principles** (April 2011).
- **Convened a Work Group** to offer input and critique results (February 2012).
- **Conducted “pilot studies” to identify and evaluate key parameters** (July 2011 to October 2013).
- **Finalized methodology** based on preceding efforts (February 2013).

# Foundational Documents✳ Resulting from Previous Efforts:

- PCC Termination Plans: Principles and Needs document.
- Policy Statement for PCC Reduction/  
Termination Alternatives.
- TGDs for: Leachate and LFG sampling plans;  
and for the preparation of a PCC plan.
- Recommended lists of leachate and LFG  
parameters for evaluating PCC trends.

✳ These **and other** documents are or will be available on the BWM website in their appropriate locations. Many of the documents were and will be provided to the BWM Work Group and to other interested parties.

# A Key **Other** Document: The Concept of Equilibrium as a Basis for a PCC Termination Methodology

- **Definitions of equilibrium and the La Chatelier-Braun Principle (see handout)**
- **MSW stability in terms of:**
  - **Potential to change**
  - **Organic matter stability**
- **Landfill operational extremes**
  - **Dry tomb (SALs)**
  - **Bioreactor (Wisconsin)**

# “Pilot Studies” with Other Data Collection and Analysis Efforts:

- **Allen County Landfill** – Mainly leachate samples and “other” data.
- **Johnson County Landfill** – Mainly leachate samples.
- **Other Subtitle D landfills** – Historical leachate data collection.
- **All Subtitle D landfills** – Leachate sample collection, storage and distribution survey.

The  of the Methodology:  
**Principles and Needs paper** as  
illustrated by the **ACL final report**  
**results.**

The following is modified version of  
the **Principle and Needs PPP**  
presentation.