

Aerobic Landfill Bioreactor Protocol Teleconference

Date of Teleconference: October 31st, 2007

Time of Teleconference: 2:00 pm – 4:00 pm

Attendees:

Gary Kay, grkay2@rogers.com

Don Davies - Stantec Consulting, don.davies@stantec.com

Shawn Rimbey, Senior Environmental Coordinator Canadian Region – Apache Canada Ltd., shawn.rimbey@apachecorp.com

Christian Felske, Research Scientist – Solid Waste Management - Alberta Research Council, Christian.Felske@arc.ab.ca

Patrick Hettiaratchi, Professor of Environmental Engineering – University of Calgary, jhettiar@ucalgary.ca

Shirley Thompson – University of Manitoba, s_thompson@umanitoba.ca

Donna Chaw, Waste Policy Advisor - Alberta Environment, Donna.Chaw@gov.ab.ca

Drew Fischer, Project Manager, Air Quality and Regulatory Compliance Services - Calvin Consulting, Drew.Fischer@CalvinConsulting.ca

Leon Green, Director – Aerobic Technology - SALT, lcgreenjr@bellsouth.net

John Baxter, President and CEO - SALT, john.baxteri@sympatico.ca

Keith Driver, VP, Operations – Baseline Emissions Management Inc., keith@baselineemissions.com

Stephanie Barrows, Project Analyst – Baseline Emissions Management Inc., stephanie@baselineemissions.com

Invitees:

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Shirley Thompson – University of Manitoba, s_thompson@umanitoba.ca

Dave Karg – Devon Canada, dave.karg@devoncanada.com

Shad Watts – Devon Canada, Shad.Watts@devoncanada.com

Tim Townsend – University of Florida, ttown@ufl.edu

Written Participation:

Michael Wood, Director of International Projects – HAZCO, MWood@hazco.com

ISSUES:

Project Scope

Patrick – The protocol seems to only deal with retrofitted landfill cells. He believes the scope should be expanded to also include landfills that were designed as bioreactors from the onset.

Also, air can be pumped in using horizontal as well as vertical pipes.

Solution – expansion of project scope to include original design bioreactors.

Aside- should scope mention that this only applies to aerobic bioreactors??

Fugitive Emissions

Patrick – Fugitives can be quite significant as venting isn't always very efficient.

Shawn – If fugitives are expected to decrease from a landfill that didn't have a system in place, we might be able to exclude them based on conservatism.

Leon – Has experimental data showing a direct correlation between venting methane concentrations and fugitive methane concentrations. This proves that fugitives are less under the project condition.

Donna – Method of surface measurements can produce very different results (ie. measurement from 0.5 m above surface vs. 1.0 m above surface produces very different results).

Solution – Using a LandGem model, proponent must get theoretical baseline methane emissions. If venting emissions are less than 5% of this volume, no fugitive emissions monitoring is required. A flexibility mechanism is built into the protocol stating that if you do not meet this requirement, field measurement and monitoring program must be put in place.

Are we providing guidance in the protocol about how to measure fugitives?

System Maintenance

How do we know the system is working? Downtime?

Leon – Air injection may sometimes go down for various reasons, but the monitoring system is continuous. Therefore, even if air is not being injected into the system, we always know the concentration of methane being vented. It can take several months for the landfill to go anaerobic after such a shut-down.

Lo Methodology

How do we determine which methodology to use?

Solution – Proponent can choose which ever way they please, but must use this same method consistently

Landfill Sampling

Donna – should we give a sampling methodology? Thinks we should give guidance around what is statistically relevant.

Solution – we will give guidance around what is statistically relevant.

Comments Received after Edited Protocol was sent out:

Fugitive Emissions:

Drew Fischer of Calving Consulting feels that fugitive emissions < 5% of the baseline does not ensure that overall fugitive emissions are negligible.

Christian Felske also had reservations about excluding fugitive emissions and also made some suggestions on their measurement.

Solution:

We have included fugitive emissions and have required them to be measured 4 times per year using a flux chamber.