

Organics Diversion & Odour Management

Presentation to:
AWMA Ontario Section
Odour Workshop – Advances in Science and Technology
October 23rd, 2012

Outline

- Organics Diversion
- Practical Odour Management
 - Technological Controls/ System Design
 - Operational Controls
 - Planning Activities
- Developing Trends



Organics Diversion

Waste Receipt



Waste Processing:

- De-bagging
- Shredding/ Grinding
- Blending

Aerobic Composting



Curing/ Maturation



Screening

Anaerobic Composting



Dewatering

Practical Odour Management

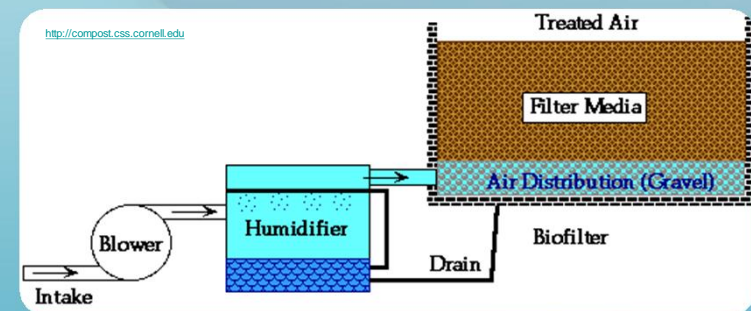
Striking the right balance....

- »»»»» Technological Controls/ System Design
 - » Facility and equipment design
- »»»»» Operational Controls
 - » How the facility is operated/managed
- »»»»» Planning Activities
 - » Contingency planning

Practical Odour Management

Technological Controls/ System Design

- Capture and Control
 - Understand inputs to control systems (process outputs)
 - Assess requirements for redundancy
 - Define expected outputs
 - Define system efficiency
 - Seek performance guarantees



Practical Odour Management

Technological Controls/ System Design

- Fugitives Management
 - Maintenance of negative pressure (process enclosure)
 - Air interlocks
 - Air curtains
 - Odour neutralization/masking agents
 - Separation from receptors
 - Etc.



Practical Odour Management

Case Study: City of Guelph Organic Waste Processing Facility

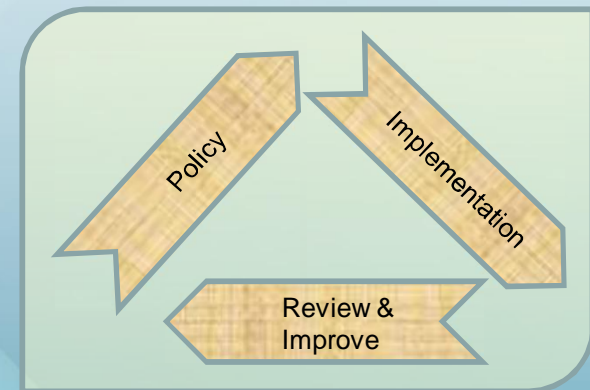


Practical Odour Management

Operational Controls

Controls as Effective as their Operation/ Management.....

- Computer Controlled/Monitored Process
- Trained Personnel
 - Composting
 - Environmental approvals and site requirements
 - Equipment operations and management
 - Standard Operating Procedures
 - Potential odour generation triggers and mitigative approaches
 - Operational ranges and corrective actions
- Odour Management Plan
- Operations & Maintenance Plan



Practical Odour Management

Case Study: City of Guelph Organic Waste Processing Facility

- Third Party Operator
 - Performance Stipulations
 - Training Requirements and Auditing
 - Clearly Defined Responsibilities (City and Operator)
- SCADA Controlled Process
- Training on ECA
- Training on Odour Management Plan, O&M Plan
- On-site Contract Manager



Practical Odour Management

Planning Activities

Responding to Operational Interruptions.....

- Emergency Response and Contingency Plan
 - Alternate disposal options
 - Equipment contingencies
 - Staff roles and responsibilities in the event of emergencies/ interruptions
- Understand Triggers to ERCP
 - What process conditions might invoke ERCP?
 - What environmental conditions may invoke ERCP?
- Implement ERCP
 - Proactive Implementation versus “Fire Fighting”

Practical Odour Management

Case Study: City of Guelph Organic Waste Processing Facility

- Commissioning Phase
 - Sensor failure
 - Limited pre-treatment of air stream to biofilter
 - Invoked ERCP
 - Allowed time to adjust/replace sensors
- Worked with MOE on Action Plan
- Facility successfully re-commissioned
- Facility passed compliance testing



Practical Odour Management

Recap....

- »»»»» Technological Controls/ System Design
 - » Facility and equipment design
- »»»»» Operational Controls
 - » How the facility is operated/managed
- »»»»» Planning Activities
 - » Contingency planning

Emerging Trends

- Waste Collection
 - Limits on diapers, sanitary products and pet waste
 - Limits on use of plastic bags
 - Limits on use of compostable bags/ liners
- Facility Design
 - Negative pressure “at all times”
- Facility Operation
 - Stakeholder consultation for ALL environmental approval amendments

Thank You...

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