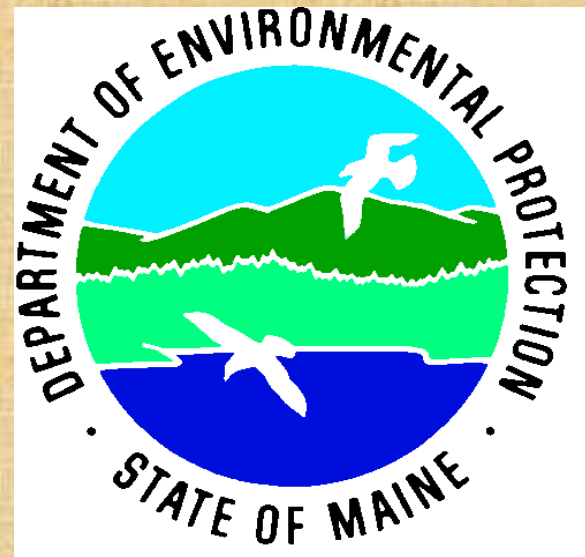


# Biomedical Waste Treatment Program Updates

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# *Bondtech BTT6X16*

## *Operating Parameters*

- 1600 pounds per cycle - 400 pounds per cart;
- Vacuum to 40 psig
- Heat to 284 F – 139 C for 3 minutes; repeat twice
- Final heat at 284 F for 15 minutes
- Venting and cooling; total cycle is about one hour
- These parameters are programmed into control panel

# *Validation Testing*

- DEP requires  $10^4$  Log reduction using *Bacillus stearothermophilus* spores
- Six cycles using biomedical waste from various generation points (OR, Lab, ICU)
- 31 out of 32 samples - no growth =  $10^5$  Log reduction
- Positive inside 17 gallon sharps container

# *Validation Materials*

- Mesa Labs wireless thermocouples
- 3M ATTEST self contained biological indicators (SCBI)
- Raven Chemstrip Integrators
- Teflon tubes





# *Challenges Going Forward*

- Reducing pathological and bypass waste
- Suction Canister management & high density waste loads
- Continue source separation of waste streams
- H1N1 possible pandemic
- Chapter 900

# *Reducing Pathological & Bypass Wastes*

- Nationally 2 – 5% pathological waste; much higher in Maine
- Trace Chemotherapy must be bypassed
- Suction Canisters with solidifiers must be bypassed – until evidence exists that they will receive adequate treatment
- New EPA incinerator rules will raise costs

# *Suction Canister Management*

- No solidifiers – OK for Biomedical Waste
- Solidifiers with disinfectant and held as a form of ‘pretreatment’ – Little data available
- Solidifiers with no disinfectant, for example SafeSorb – divert for incineration
- Consider on-site treatment and disposal

# *Suction Canister Management Continued*

- On site treatment and disposal via direct discharge to sanitary sewer. Must use PPE and follow guidelines (OSHA and IC)
- Automated flush systems such as Bemis, Dornach or Stryker
- These eliminate solidifiers and discharge to sanitary sewer

# *Source Separation Biomedical Waste Load Composition*

- Biomedical Waste – Yes – Chapter 900
- Chemicals - No
- Electronic Devices / Components - No
- Medical Devices - No
- Batteries - No
- Pharmaceuticals - No

# ***OTHER WASTES TO BE MANAGED***

## **HAZARDOUS**

- *Laboratory chemicals  
(solvents; acids/bases)*
- *Radiology products*
- *Mercury-containing  
items*
- *Other items  
containing heavy  
metals*
- *Pharmaceuticals*

## **NON-HAZARDOUS**

- *Plastics*
- *Paper / wood-fiber  
products*
- *Food*
- *Other disposables*

# *H1N1*

- 36,000 die in US from seasonal flu every year
- Will waste volumes increase?
- AHR regional treatment facility?
- Personal Protective Equipment (PPE) needs? (N-95 respirator)
- Airborne pathogen?

## *Chapter 900 Compliance*

- Identifying, packaging, labeling, storage and handling requirements (Section 12)
- Generator may transport less than 50 pounds without transporter license
- Facility may accept less than 100 pounds per month without a biomedical waste transfer facility license

## *Chapter 900 Compliance (registration)*

- Does this facility need their own number?
- No....if..
- Located inside or connected to facility already registered and practice is owned by facility and staff are employees
- Yes for all others (multiple locations, different facilities on same campus)

# *Revisions to Chapter 900*

- Only Sharps Require Shredding
  - Waste Segregation Required
- Treated Biomedical Waste is a Special Waste, not a solid waste (MSW)
  - Landfilled, not Incinerated
- Annual registration & fee

*Thank You!*

