

NESCAUM Overview of 3 Regional Initiatives, 2007

CT SIPRAC

Hartford, CT

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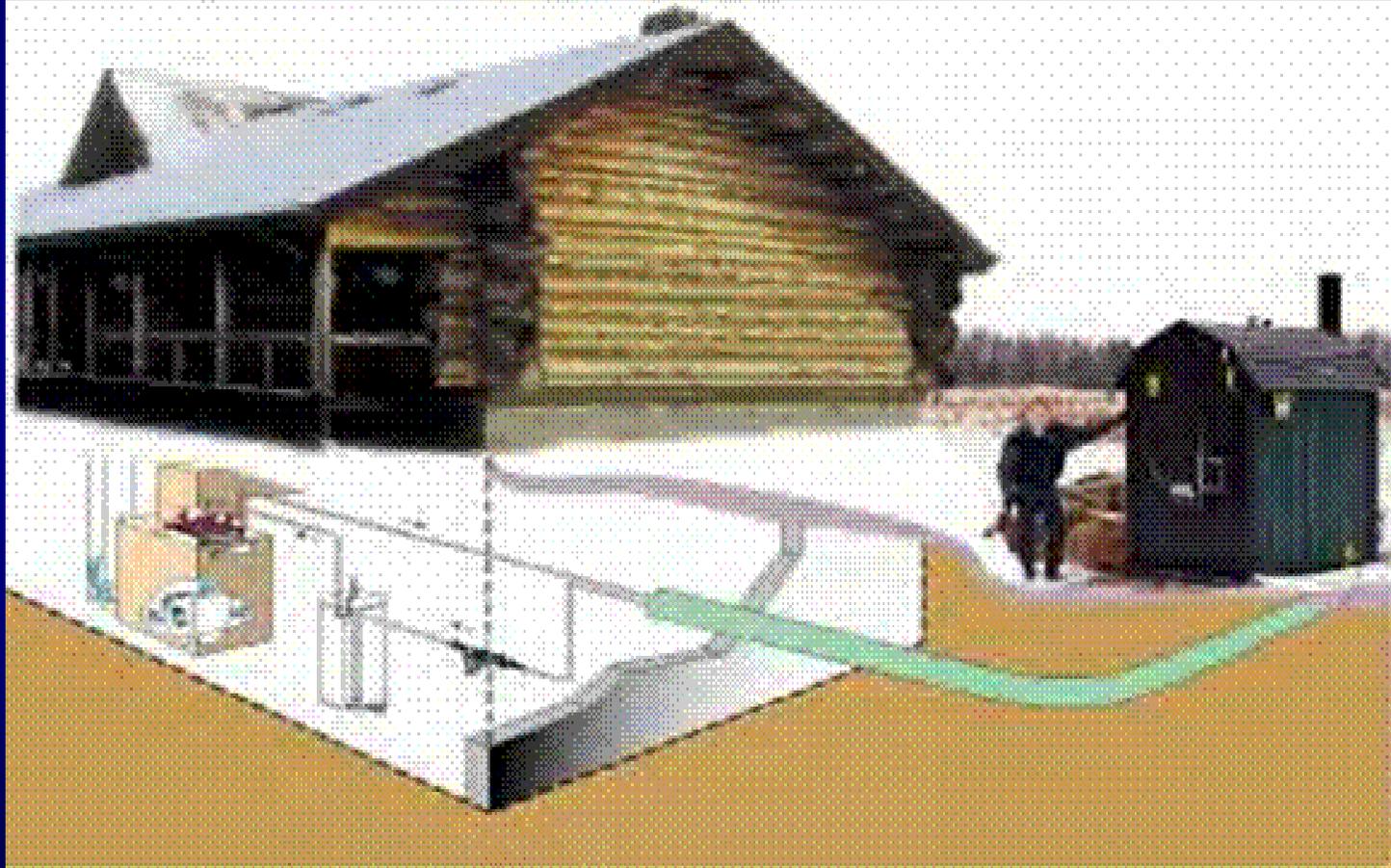
Presentation Overview

1. PM2.5: Outdoor wood-fired boiler model rule
2. GHGs: Multi-state Climate Registry
3. Metals: Sampling distillate oil for mercury, other toxic metals, sulfur

1. Outdoor Wood-fired Boiler Model Rule



What are OWBs?



Cause for Concern

- Increasing sales
- Uncontrolled PM sources
- Local and regional impacts
- Lack of info on air toxics (PAH, POM, dioxins)
- Misuse possible (and sometimes encouraged)

OWBs Don't Compare Well

1 OWB's PM emissions ~=

- 4 non-certified wood stoves, or
- 18 certified wood stoves, or
- 205 oil furnaces, or
- 3,000-8,000 natural gas furnaces

From CT DEP



Local and Cumulative Impacts

- Residential use exposes neighborhoods to higher PM levels
- OWBs could contribute almost 900,000 tons of particulate matter by 2010
 - By comparison, NY primary PM10 emissions ~450,000 tons in 2002

Uncontrolled Pollution

- OWBs generally do not have emission controls required in other residential wood-fired devices
- Short term PM spikes can be very high
- Current regulations in NE do not adequately address OWBs

Critical Elements of Model Rule

- Critical definitions
- Labeling requirements
- Emission limits
- Test method procedure
- Certification process

Labeling Requirements

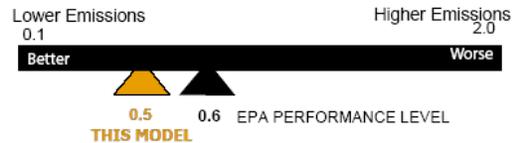
U.S. Environmental Protection Agency Outdoor Wood-Fired Heater Program

This Outdoor Wood-Fired Heater has been tested and meets certain air quality performance requirements.*

By meeting these requirements this model is cleaner and pollutes less than those models that have not met these performance levels. Exposure to wood smoke has been associated with respiratory illness and other health problems. Models that have lower smoke emissions may reduce your family's risk.

For more information go to www.epa.gov/owhh

OUTDOOR WOOD-FIRED HEATERS SMOKE EMISSIONS RANGE



Outdoor hydronic heaters with lower emissions produce less smoke when installed and operated properly.

MANUFACTURER:	XXXXXXXXXX
MODEL NO:	XXXXXXX
8-HOUR HEAT OUTPUT RATING:	58,000 BTU/HR
EMISSIONS:	0.5 LBS/MILLION BTU INPUT XXX GRAMS/HR

* - This model has been tested by an independent laboratory according to EPA method 28 OWHH and meets performance levels for U.S. EPA's Phase 1 Voluntary Program.

Phase I Requirements

- 0.44 lb/mmBtu heat input
 - Same for residential & commercial units
- 500 foot setback and stack height requirements
- March 31, 2008 compliance date

Phase I Transition

- Several units commercially available likely to meet Phase I
- Modeling indicates local exceedances will still persist

Phase II Requirements

- Residential - 0.32 lb/mmBtu heat output
 - No setback requirement
- Commercial - 0.32 lb/mmBtu heat output
 - Setback requirement: 300 feet or more from property line; stack 5 feet higher than the peak of any structure within 150 feet
- March 31, 2010 compliance date
 - Technology forcing
 - No modeled exceedances of PM2.5 NAAQS

Regional Goals & Next Steps

- Technology forcing
- Uniform key elements across states
- Meet new PM_{2.5} NAAQS
 - No modeled exceedances with Phase II
- Up to states/locals whether to adopt

2. Multi-state Climate Registry

Registry Vision

- Develop multi-sector GHG reporting and tracking registry across states
- Consistent, high quality, transparent accounting, reporting & verification
- Policy neutral - mandatory or voluntary

Why a Multi-state Registry?

- States moving forward with climate initiatives, e.g., RGGI
- Lack of high quality national GHG reporting system
- Easier “on ramp” from voluntary approaches

Needs Addressed

- Pools limited state resources
- Minimize companies' reporting costs through single reporting portal
- High quality and wide state participation promotes recognition for early action

Opportunities for Business Community

- Document early action
- Identify GHG emissions risks and opportunities
- Gain access to user-friendly web-based software emissions reporting platform
- Engage in a multi-state effort that is *likely* to influence a national GHG registry program

Implementation Timeline

- September 2006-February 2007
 - Steering Committee (15 high-ranking environmental officials representing participating states and regions) outlines technical framework, guiding principles, and organizational structure
- Spring/Summer 2007
 - States sign MOU in March/April 2007
 - Establish governance board & incorporate nonprofit organization
 - Develop emissions accounting and reporting standards,
 - Select and finalize software platform
- December 2007
 - Registry becomes operational and is ready to receive data from reporting entities
 - Continued collaboration with state climate change programs

Registry Recap

- Establishing a common standard for tracking and measuring GHG emissions and best practices
- Lowers costs to states and supports future needs in climate change policy
- Policy neutral; mandatory or voluntary reporting
- Minimizes costs to reporting entities and promotes early action recognition

3. Sampling distillate oil for sulfur and toxic metals

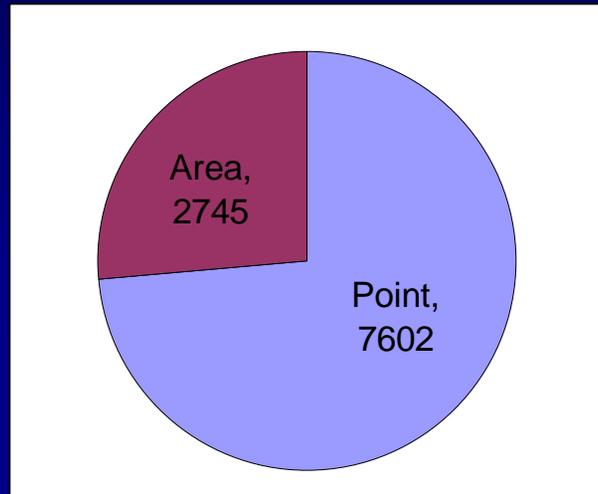
Sampling Distillate Oil

- New 2-yr project with NYSERDA funding
- Will sample mercury, sulfur, nickel, and vanadium
- Involves heating oil suppliers in Northeast

Questions on NE Distillate Oil

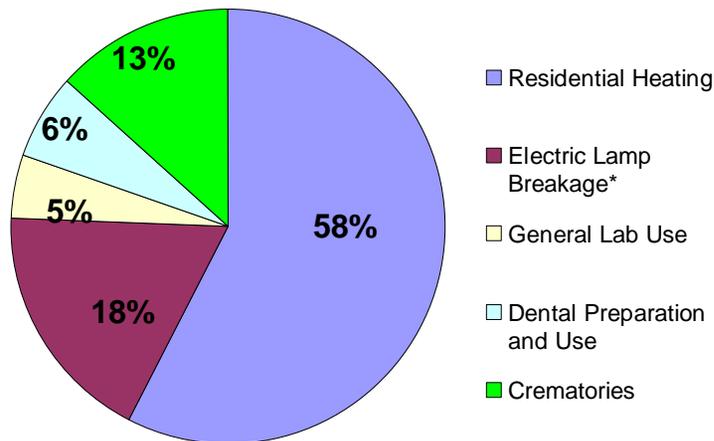
- What's the actual range of Hg, Ni, Va levels?
- What's the actual S content range?
- Is there a correlation between S content & content of Hg, Ni, & V?

Is Hg in Heating Oil Significant?

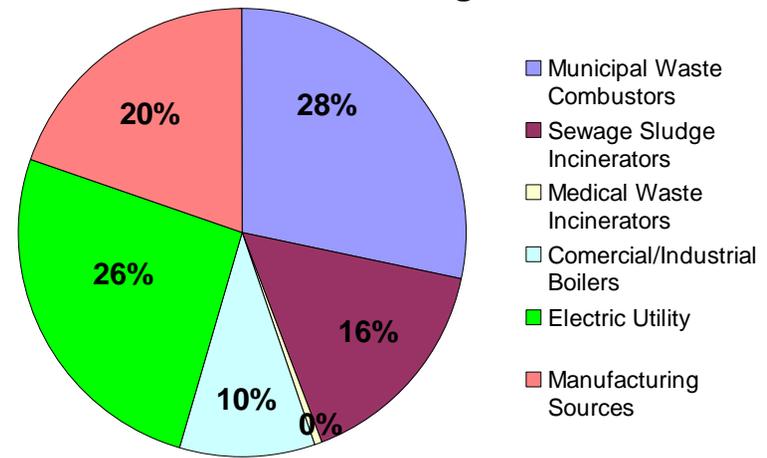


2002 Inventory
Hg lb/yr

2002 Area Source Hg Emissions



2002 Point Source Hg Emissions



Studies of Hg in Oil

- Crude oil up to several ppm (1000s ppb) in Hg, but spans wide range
- Refined products tend to be lower
 - 1-10 ppb range
- By comparison, AP-42 factors are:
 - ~60 ppb for No. 2 oil
 - ~15 ppb for No. 6 oil

Approach

- Develop sampling strategy for NE distillate oil
- Develop sample handling protocol
- Sample over 12 month period
- Laboratory analysis

Correlation with S Content?

Sample across 3 fuel types:

1. Heating oil (~2,500 ppm S)
2. Non-road diesel (~500 ppm S)
3. Highway diesel (15 ppm S)

Project Goals

- Determine if heating oil in Northeast a significant Hg source
- Better quantify other metals
- Investigate correlation, if any, with S content

Summary of 3 Regional Initiatives

1. OWB model rule
2. Multi-state Climate Registry
3. Sampling distillate oil for S & toxic metals

<http://www.nescaum.org>

