



AAPCA – Wood Products Discussion

November 15, 2018

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Department of Environmental Quality



Overview

- **Wood pellet facilities**
- **Log fumigation – Methyl Bromide Acceptable Ambient Level (AAL)**

Wood Pellet Facilities

- **5 wood pellet facilities operate or under construction in NC**
 - **1 Synthetic Minor**
 - **4 Title V**
 - **1 is PSD minor**
 - **1 is PSD minor – will install controls**
 - **2 are PSD major**
 - **1 will install controls to become PSD minor during construction**
 - **1 is installing controls & will remain PSD major**

Wood Pellet Facilities

- **Violations documented due to failed source tests & failure to demonstrate compliance**
- **Questions regarding the dryer technology**
- **Questions regarding emissions factors and therefore permit applications and decisions**

Wood Pellet Facilities

- **1 facility in a Special Order by Consent due to violations**
- **Additional source testing will be required to verify emissions estimates**
- **Additional permitting actions**

Wood Pellet Facilities

- **Controls:**
 - **Regenerative Thermal Oxidizer – Dryer**
 - **Regenerative Catalytic Oxidizer – Pellet Coolers**
- **Reduction of VOCs & HAPs by half**
- **Facilities requesting increase in production and softwood percentage**

Wood Pellet Facilities

- **Interest from:**
 - **Community groups**
 - **Environmental Justice groups**
 - **Environmental groups**
 - **SELC, Dogwood Alliance, Sierra Club, Clean Air Carolinas, Environmental Integrity Project**

Log Fumigation Operations Methyl Bromide

Methyl Bromide Log Fumigation Operations

The Montreal Protocol banned most uses of methyl bromide due to its ozone depleting properties.

- **Quarantine and pre-shipment use of methyl bromide**
 - **Whole logs exported primarily to China & India**
 - **Fumigant used to kill wood boring pests prior to shipping**

Methyl Bromide Log Fumigation Operations

- **The process:**
 - **Logs placed in a shipping container. Doors closed.**
 - **Fumigation of logs inside container.**
 - **Residence time ~60-72 hours.**
 - **Aeration = Open doors and vent to atmosphere.**

NC had 5 permitted synthetic minor log fumigation facilities:

- **Report 100% usage as emissions**
- **Reporting conditions & < 10 tpy limit to avoid major source classification.**

Methyl Bromide Log Fumigation Operations

- **Fall 2017 / Spring 2018:**
 - **Received 2 applications for HAP major facilities**
 - **60 tpy**
 - **140 tpy**
 - **Received additional permit applications and interest in siting facilities**

Methyl Bromide Log Fumigation Operations

DAQ's concerns:

1. Methyl Bromide is a Hazardous Air Pollutant (HAP).
2. The potential for acute (short-term) exposures: methyl bromide is highly toxic and studies in humans indicate that the lung may be severely injured by the acute inhalation exposures. Acute and chronic inhalation of methyl bromide can lead to neurological effects in humans.
3. There are no federal or state air quality regulations to protect the public from these emissions.
4. Unlike many agricultural uses, log fumigation facilities are industrial point sources where much greater quantities of methyl bromide are used and emitted in one spot.

Methyl Bromide Log Fumigation Operations

Summer 2018 - Multi-faceted strategy:

Temporary and Permanent rule – Health-based approach. Establish an Acceptable Ambient Level (AAL) based on robust risk assessment data.

- Consultation with Science Advisory Board (SAB) in October
- Draft AAL to Air Quality Committee of the Environmental Management Commission in November

Existing facilities – 5 in NC. 60-day notice of intent to modify their air permit.

- Put them on a path to comply with the temporary rule.

New major source – Malec Brothers Transport: DAQ requested additional info.

- Capture/control technology plan; Detailed monitoring plan; Operational limitations

Other new permit applicants: DAQ requested additional info.

- Capture/control technology plan; Detailed monitoring plan; Operational limitations

Royal Pest Solutions

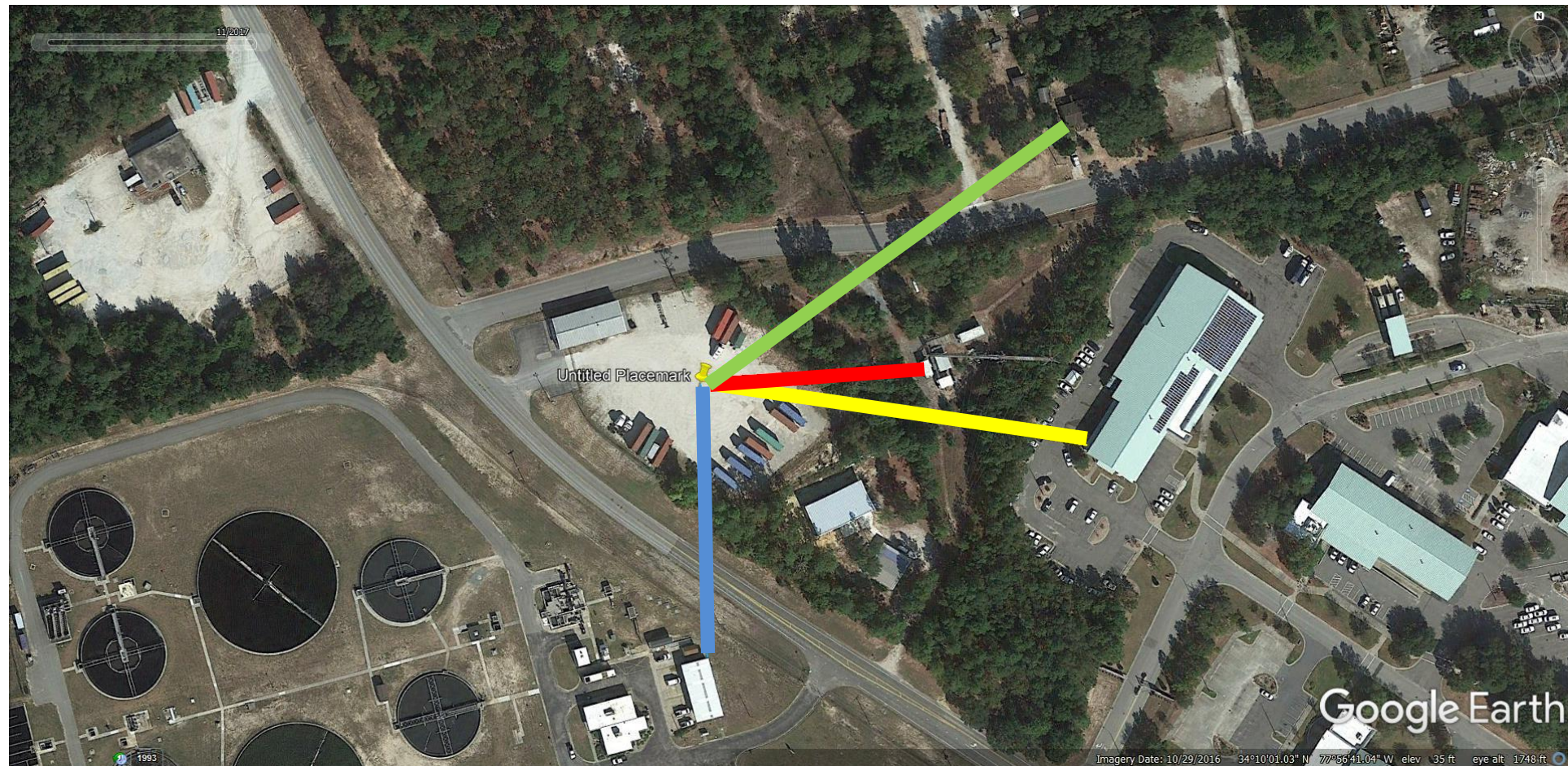
3701 River Road
Wilmington, NC

Red line = 238 feet

Blue line = 346 feet

Yellow line = 496 feet

Green line = 550 feet



Flowers Timber

140 Greenfield
Cemetery Rd.
Seven Springs, NC

Red line = 220 feet



Methyl Bromide Control Technologies

- **NC DAQ has communicated with 3 primary vendors of control technology**
 - **Mebrom – Thermal destruction, catalytic oxidation, scrubbing**
 - **Value Recovery – Carbon adsorption, desorption and scrubbing**
 - **Nordiko – Carbon adsorption and scrubbing**

Thank You!

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<http://deq.nc.gov/about/divisions/air-quality>