

Questions from the August 15, 2018 Environmental Management Commission meeting. Responses represent the best information available as of September 4, 2018.

1. Is methyl bromide regulated in South Carolina? How do other states regulate methyl bromide? What are their Acceptable Ambient Levels? How do they compare to DAQ's proposal in the temporary rules?

Answer: DAQ recommends an acceptable ambient level for methyl bromide at 0.005 milligrams per cubic meter (mg/m<sup>3</sup>) (equivalent to 5 micrograms per cubic meter (ug/m<sup>3</sup>)). DAQ staff reviewed air quality regulations from several states and spoke to staff in air quality agencies to better understand the existing methyl bromide ambient levels. There is a range of ambient values within and across averaging time periods. DAQ is recommending a value consistent with several other states.

South Carolina and Virginia both have ambient values for methyl bromide. South Carolina has produced a fumigation permitting guidance document: <http://www.scdhec.gov/Environment/docs/FumigationGuidance.pdf>. The document explains that permitting is required when emissions exceed exemption levels.

Virginia has implemented the Qualified Fumigation Facility law (§ [10.1-1308 of the Code of Virginia](#)) as explained in the Virginia DEQ's fact sheet: [https://www.deq.virginia.gov/Portals/0/DEQ/Air/Forms/QFF\\_Fact\\_Sheet.docx](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Forms/QFF_Fact_Sheet.docx). Under the Qualified Fumigation Facility, a facility is exempted from air permitting if they meet one of the criteria: 1) 300 foot buffer from property lines, 2) employ capture and control of the fumigant, 3) monitor concentrations at the property line.

The table below includes other states "acceptable ambient levels" for methyl bromide.

units = mg/m <sup>3</sup>					
	Annual	24 hr	8 hr	1 hr	15 min
Arizona				0.5	
California		0.8		3.9	
Connecticut			0.4		
Florida	0.000006	0.048	0.2		
Georgia	0.005				0.8
Idaho		9.5E-07			
Kansas	0.0475				
Maryland			0.03883		
Massachusetts	0.00264	0.00528			
Michigan	0.005				
Minnesota		0.005			
North Dakota			7.7E-08		
New Jersey	0.005			3.9	
New York	0.005			3.9	
Nevada			4.76E-06		
Oklahoma		0.2			
Pennsylvania				0.48	
South Carolina*		0.1			
Virginia			0.000019		
Vermont	0.00001				
Washington State		0.005			
Wisconsin		0.0932			

\* Note: South Carolina's policy is to set their level at the EPA's RfC, which is 0.005 mg/m<sup>3</sup>; however, SC's level was last set prior to the current EPA IRIS assessment.

2. How are stakeholders impacted by the proposed temporary rulemaking?

Answer: With the proposed approach for temporary rulemaking focused on adding an Acceptable Ambient Level (AAL) for methyl bromide to 15A NCAC 02D .1104 at the EPA's RfC, or 0.005 mg/m<sup>3</sup> (5 ug/m<sup>3</sup>), impacted facilities would demonstrate compliance through the permitting process by providing modeling using established procedures. The modeling shall be used to determine process operational and air pollution control parameters and emission rates for toxic air pollutants to place in the air quality permit for that facility that will prevent the acceptable ambient level from being exceeded. The owner or operator of the facility may provide the modeling analysis or may request the Division of Air Quality to perform the modeling analysis of the facility. Additional details of the procedures for determining ambient air concentrations can be found in 15A NCAC 02D .1106, 02Q .0709 and .0710.

Owner or operators of log fumigation facilities will have several options available to them in complying with an AAL, including, but not limited to:

- Operational limitations to reduce emissions (time of day, day of week, # per day)

- Physical changes to reduce emissions or ambient impacts (control devices, stacks, fans)
- Location/larger property for the purpose of reducing impacts in ambient air (provide greater distance from property line)

The site specific facts at each operation will determine the combination of measures listed above that may be necessary to demonstrate compliance.

3. What are the perspectives of the Department of Commerce and the Department of Agriculture and Consumer Services on the proposed rulemaking?

Answer: DEQ briefed Department of Commerce (DOC) officials about the proposed rulemaking approach. DOC asked whether the rulemaking proposal impacted the wood pellet industry. DEQ indicated it does not. No other concerns were raised. DEQ officials also briefed Department of Agriculture and Consumer Services (NCDA&CS) on the proposed rulemaking approach. NCDA&CS noted that logs are a big export business and would be concerned if this approach ended the export business. DAQ staff met with NCDA&CS staff from Structural Pest Control and Pesticides Division and had a very productive dialogue about DAQ's concerns with the existing facilities and the proposed rulemaking approach.

4. Are there statutory barriers in adding methyl bromide to the toxic air pollutant list?

Answer: There are not statutory barriers. Authority exists via G.S. 143-215.107(a)(3), (4), and (5). Excerpts below in italics.

*§ 143-215.107. Air quality standards and classifications.*

*(a) Duty to Adopt Plans, Standards, etc. – The Commission is hereby directed and empowered, as rapidly as possible within the limits of funds and facilities available to it, and subject to the procedural requirements of this Article and Article 21:*

- ...
- (3) To develop and adopt, after proper study, air quality standards applicable to the State as a whole or to any designated area of the State as the Commission deems proper in order to promote the policies and purposes of this Article and Article 21 most effectively.*
  - (4) To collect information or to require reporting from classes of sources which, in the judgment of the Environmental Management Commission, may cause or contribute to air pollution. Any person operating or responsible for the operation of air contaminant sources of any class for which the Commission requires reporting shall make reports containing such information as may be required by the Commission concerning location, size, and height of contaminant outlets, processes employed, fuels used, and the nature and time periods or duration of emissions, and such other information as is relevant to air pollution and available or reasonably capable of being assembled.*
  - (5) To develop and adopt emission control standards as in the judgment of the Commission may be necessary to prohibit, abate, or control air pollution commensurate with established air quality standards.*

5. What's the frequency of methyl bromide fumigation at existing log fumigation operations?

Answer: Existing log fumigation operations do not have any restrictions in their current air quality permits that limit the frequency of the operations. The only requirement is that annual methyl bromide emissions stay below 10 tons per year. Depending on the situational demand and logistics, fumigation operations can occur daily.

6. Are there alternative fumigants to methyl bromide for fumigating logs?

Answer: Sulfuryl fluoride, phosphine, ethanedinitrile and ethyl formate are alternatives, however, the receiving countries such as China and India are not accepting logs using any of these alternative fumigants. On occasion, the destination countries will accept debarked whole logs, instead of fumigated logs. But it's our understanding that "exception" situation is fluid and fickle. We have heard concerns that the quality of the log after being debarked... so after a long haul to the destination country, there is some deterioration of the product. It is our understanding that China usually wants the bark on the logs as they use it for fuel.

7. Why isn't China or India accepting logs from South Carolina or Virginia currently?

Answer: It is our understanding this is due to a particular pest concern in those states.

8. What are the other applications of methyl bromide according to the Department of Agriculture and Consumer Services?

Answer: According to the Department of Agriculture and Consumer Services, there are no longer critical use exemptions in agriculture except for the treatment of country ham. There are also quarantine pre-shipment exemptions for a small strawberry nursery and a Christmas tree nursery.

9. How far does methyl bromide drift to cause potential issues to the public?

Answer: The answer to this question depends on the site-specific conditions. Please see the presentation slides for more detailed information regarding the existing log fumigation facilities in NC. Generally, methyl bromide is a stable compound that takes weeks, months, or years to break down under normal atmospheric conditions.

10. A request was made that DAQ assess the amount of methyl bromide emissions coming from the 5 existing facilities and the operations' growth projections.

Answer: Royal Pest Fumigation Facilities emissions:

- Port- Burnett Blvd (Wilmington)- As of July 2018, >10 tons for previous 12 months
- River Rd (Wilmington)- as of December 2017, the facility had emitted 9.8 tons in 6 months
- Chadbourn – as of July 2018, 6.6 tons in previous 12 months

- RLS Log facility (Elizabethtown) – Has reported no emissions in the past year
- Flowers Lumber – Started operation this summer, ~0.5 tons in first month.
- Sunnyvale (permit now rescinded) (Wilmington)- As of April 2018, 9.8 tons for previous 12 months

11. A request was made that DAQ assess the anticipated economic growth in the next 5 years without the proposed temporary rules as a baseline.

- Answer: DAQ reached out to stakeholders on August 17, 2018 asking for information on:
  - The number of containers of logs exported per year.
  - Economic figures on the value of a container of whole logs, how big the log export market is currently, and what do the future projections look like?
  - Percentage of logs that are fumigated vs. debarked prior to export?

No official response has been received. However, DAQ understands that the data regarding forest products exports does not tease out whole log exports. Anecdotal evidence from timber representatives estimates up to 30% of the logs being exported are debarked.

12. A request was made that DAQ assess the economic impacts of the proposed temporary rules from a county property tax and jobs perspective without placing the public's safety at risk.

Answer: While it is clear to DAQ that the proposed temporary rules will be protective of public health, it is not clear how they will impact county property tax and jobs. The existing facilities will have several compliance options available to them – as discussed in #3 above. This provides maximum flexibility to the facilities, while ensuring protection of public health. It is also DAQ's understanding that Royal Pest Solutions does not own any of the properties where the existing 5 log fumigation operations are located. They rent space based on the number of containers that come onto the property. This would suggest the proposed rules would not have an impact on county property taxes.

13. A request was made that DAQ assess the information and data provided by the existing log fumigation operations' representatives/scientists.

Answer: DAQ has met with Royal Pest Solutions twice over the last several weeks. It is DAQ's understanding that the company and its consultant believe the EPA's chronic RfC should be represented as an annual AAL rather than a 24 hour AAL. DAQ asked Royal Pest Solutions for feedback on the draft rules and preliminary modeling (as presented in the powerpoint presentation). No specific feedback has been received as of September 4, 2018.