CAPCA Spring 2019 Meeting

North Carolina Legal Update

Sean M. Sullivan

April 12, 2019

Topics

Science Advisory Board

Methyl Bromide

Chemours Consent Decree and Modified Title V Permit

North Carolina Executive Order 80 / Climate Change

Odds and Ends

Science Advisory Board

Re-Chartered in July 2017 to Assist DEQ and DHHS in Establishing Health-Based Exposure Limits for Environmental Contaminants

- Meets at least six times per year
- Makes recommendations on:
  - Need for reviews or evaluations of releases to the environment
  - How to regulate releases to the environment
  - Urgency of establishing such regulations
  - Consult with DEQ on regulation of releases, including establishment of acceptable exposure levels
  - Recommend acceptable concentrations of contaminants based on a “range of risks”
  - Evaluating multi-media effects of releases
  - Availability of new information about a contaminant and the implications for existing standards
  - DHHS’s efforts to establish health goals
  - Identifying emerging contaminants and need for evaluation of their health effects

Science Advisory Board

Factors in making recommendations on "range of risk" concentrations:

- Have toxicological principles been appropriately applied in development of media-specifc exposure concentration?
- Should substances with adverse reproductive / developmental effects "be treated with risk assessment factors"?
- Should synergistic effects of contaminant mixtures be considered?
- Should acceptable concentrations of contaminants be adjusted because of presence of multiple sources in a localized area?
- How should uncertainties be incporated into the development and revision of acceptable concentration limits?

What isn't here? – COST CONSIDERATIONS AND ACTUALLY SETTING THE STANDARDS

Science Advisory Board

Recent Actions

- February 2019 – concurrence with DEQ's proposed AAL for methyl bromide
- February 2019 – concurrence with DEQ's recommended action levels for TCE in indoor air
- October 2018 – concurrence with DHHS's proposed drinking water health goal for GenX

Ongoing Evaluations

- Hexavalent chromium

Topics

Science Advisory Board

Methyl Bromide

Chemours Consent Decree and Modified Title V Permit

North Carolina Executive Order 80 / Climate Change

Odds and Ends

Methyl Bromide

Used to treat timber before export, primarily to China and India

- Typically applied to timber in a confined space for 60-72 hours, then released into the atmosphere
- Acute and chronic toxicity documented (status as carcinogen unknown)
- Colorless and odorless
- Reregistered as a pesticide under FIFRA in 2016
  - New label requirements include establishing buffer zones between treatment containers to protect workers and bystanders
- Most other uses banned by Montreal Protocol – ozone depleting substance

Not currently listed as a North Carolina TAP

Five existing permitted facilities (synthetic minor) – only requirements are to limit usage to less than 10 tpy and report on usage

- Other operators have also expressed interest in moving into the state

Methyl Bromide

DEQ originally asked the EMC for temporary rules establishing a fenceline AAL of 1 ppbv and requirements for control of emissions from fumigation operations

- EMC ultimately rejected request for temporary rules
- Proposed AAL based on reference concentration for chronic exposures

EMC asked DEQ to consult with the Science Advisory Board regarding the appropriate AAL

- Total of 40 public comments; only five argued DEQ's proposed AAL was too stringent
- Industry Criticisims:
  - Fenceline AAL is an acute exposure proposition and using a chronic exposure limit to set the AAL is inappropriate
  - Unreasonable use of uncertainty factors to reduce proposed AAL
  - OSHA-based standards are sufficient to establish an AAL
  - FIFRA registration already contemplates protections for workers and bystanders
- DEQ Responses:
  - Chronic exposure limit is better protection against uncertainty and for sensitive populations
  - OSHA standards focus on healthy adult population, not sensitive groups

Methyl Bromide

Final SAB report forthcoming, but it appears the SAB agrees with DEQ's proposed AAL

Next step – EMC considers establishing permanent rules for a fenceline AAL and possibly emission control requirements

- SAB has made a recommendation as to the appropriate exposure limit, but the EMC decides whether and how to regulate the activity.

Topics

Science Advisory Board

Methyl Bromide

Chemours Consent Decree and Modified Title V Permit

North Carolina Executive Order 80 / Climate Change

Odds and Ends

Chemours Consent Decree and Modified Title V Permit

Changing Understanding of Emissions of GenX from Fayetteville Works

- Original 2016 estimate – 66.6 lbs/year
- October 2017 revision to 2016 estimate – 594 lbs/year
- April 2018 calculation by DEQ – 2,758 lbs/year

Discovery of Atmospheric Deposition

- Early to mid-2017, GenX is primarily a surface water issue
- Mid to late 2017, DEQ discovers the extent of groundwater contamination and identifies air emissions as likely source
- January to April 2018, rainwater sampling identifies deposition as far as 20 miles from the facility

April 6, 2018 – DEQ sends a 60 day notice to Chemours of DEQ's intent to modify the Facility's Title V permit

Chemours Consent Decree and Modified Title V Permit

Basis for the 60-Day Notice

- 15A NCAC 02Q.0519(a)(2) – conditions under which the permit was issued have changed
- 15A NCAC 02Q.0519(a)(7) – modification necessary to carry out "the purpose of NCGS 143, Article 21B."

Changed Conditions

- Stack testing determined significantly higher emissions of GenX than previously thought
- Emissions are resulting in atmospheric deposition of GenX
- GenX deposition is causing violations of NC *groundwater quality standards*

Purpose of NCGS 143, Article 21B

- NCGS 143-211 establishes "clear mandate" for environmental protection
- Statute endorses a "total environment of superior quality"
- Coordinated protection of air and water resources, including groundwater

Groundwater Violations?

2L Rules – Groundwater – 15A NCAC 02L.0202(d&f)

- Standards must be set as "the least of":
  - Systemic threshold concentration (non-carcinogenic effects) based on effects to 70kg human
  - Concentration corresponding to increase in lifetime cancer risk of 1 X10-6
  - Taste threshold limit
  - Odor threshold limit
  - Maximum Contaminant Level (MCL) established by EPA for drinking water from public water systems
  - National secondary drinking water standard – 15 contaminants directed towards odor, taste, color, etc.
- EMC can establish a standard that is less stringent than the MCL or the secondary standard if:
  - More recent data from certain sources supports a less stringent standard
  - It will not endanger human health or the environment
  - Compliance with the MCL or the secondary standard will "produce serious hardship without equal or greater public benefit."

Groundwater Violations?

2L Rules – What if there's no established standard?

- 15A NCAC 02L.0202(c) – "Substances which are not naturally occurring and for which no standard is specified shall not be permitted in concentrations at or above the practical quantitation limit in Class GA or Class GSA groundwaters."

- Practical Quantitation Limit – "lowest concentration of a given material that can be reliably achieved among laboratories within specified limits of precision and accuracy by a given analytical method during routine laboratory analysis." 15 NCAC 02L.0102(15).

- According to DEQ – any detection of any non-natural substance above its PQL is a violation that can trigger corrective action under 02L.0106 unless there is an established standard for that substance

- Interim Maximum Allowable Concentration (IMAC) – 02L.0202(c) – allows any person to petition DEQ to establish an IMAC for a substance that does not have an established standard.
  - If DEQ establishes an IMAC, it must "initiate action" to consider adoption of a standard for that substance.

Groundwater Violations?

The Structure of the 2L Rules

- Establishing an IMAC appears to be the only way to avoid the conclusion that the detection of an unnatural substance without a standard constitutes a violation that establishes corrective action authority under 02L.0106.
  - How do you establish an IMAC for an emerging contaminant? The whole idea is that we don't have enough information about these contaminants to set a standard.
    - What would that IMAC petition look like?
    - DEQ is supposed to "initiate action" to consider a binding standard within three months of adopting an IMAC. Given the lack of information about an emerging contaminant, would DEQ really want to lock itself into having to initiate a rulemaking proceeding?
  - If I were DEQ's lawyer – I wouldn't be in a hurry to establish a standard.
    - Promulgating a rule takes time and money, and it opens the door to someone seeking judicial review of it.
    - The current structure gives DEQ corrective action authority under the 2L rules for any detection above the PQL, so why limit yourself?
    - As more data comes in about a substance, you might learn that you need to reduce the standard again – more time and money, plus the political blowback of setting a standard that wasn't stringent enough.

Groundwater Violations?

What is the PQL for an Emerging Contaminant?

- We are talking about parts per trillion in many cases, and sometimes less than 1ppt. Are lab results really that reliable?
  - Consider the potential for sample contamination – DEQ has established strict requirements for employees sampling for GenX (including limits on types of clothing and not eating fast food before taking samples).
  - Do we really know enough about these substances to know these precautions will be effective and produce a reliable, accurate result?

We are just getting started on the question of Emerging Contaminants.

- Researchers, citizen scientists and others who are all questioning whether we really know what industrial facilities are emitting. How many more substances like GenX could be out there?
- We're going to find PFAS in lots of unexpected places. For example, it has been used in chrome plating operations to maintain surface tension on plating baths to control HAP emissions.

Purposes of Article 21B?

"Total environment of superior quality"

- Chemours' new Title V permit cites 02Q.0519(a)(7) (purposes of Article 21B) as the basis for requiring installation of a thermal oxidizer and reduction of GenX emissions by 99.99%
- Also provides the basis for requiring a shutdown/malfunction plan
- And provides the basis for establishing enhanced LDAR requirements

New annual emissions limit of 23.027 lbs/year

- My question – if any detection of GenX in groundwater is a violation, is this new limit sufficient to prevent any atmospheric deposition capable of causing a detection above the PQL?
- Seems more likely that it's sufficient to prevent any detection above the health-exposure limit established by the SAB (140 ppt).
- If it's the latter – seems like DEQ is exercising its enforcement discretion on the basis of an SAB opinion, which means the SAB recommendation is a de facto 2L standard for GenX that hasn't gone through rulemaking at the EMC.

Back to the Science Advisory Board

The whole idea was to respond to criticism of DEQ's and DHHS's process for setting health-based exposure limits by developing a "blue ribbon panel" to opine on the agency's proposed limits.

- In that regard, the SAB has functioned as intended, even if certain parties disagree with the outcomes.

Methyl bromide is a good example of the EMC pushing back against DEQ's proposed regulations and forcing the Department to use the SAB process.

GenX may highlight an unforeseen weakness in the SAB approach: separating the establishment of health-based limits from establishing binding legal standards (which must include broader policy considerations, not just toxicology).

Topics

Science Advisory Board

Methyl Bromide

Chemours Consent Decree and Modified Title V Permit

North Carolina Executive Order 80 / Climate Change

Odds and Ends

Executive Order No. 80

The State of North Carolina will support the 2015 Paris Agreement goals an honor the state's commitments to the United States Climate Alliance by striving to accomplish the following by 2025:

- Reduce statewide greenhouse gas emissions to 40% below 2005 levels
- Increase the number of registered, zero-emission vehicles (ZEVs) to at least 80,000
- Reduce energy consumption per square foot in state-owned buildings by at least 40% from fiscal year 2002-2003 levels
- Evaluate and improve vulnerability and resiliency of infrastructure in light of expected effects of climate change.

Executive Order No. 80: Projected Emission Reductions

North Carolina's GHG Emissions

million metric tons carbon dioxide equivalent ($MMTCO_2e$)

Sector	2005	2017	2025
Electricity Use	79.37	52.60	40.59
Transportation	55.19	48.72	41.00
Residential/Commercial/Industrial Combustion*	26.02	20.92	23.26
Agriculture	10.65	10.53	10.47
Waste Management	8.52	8.77	10.17
Industrial Processes	3.83	7.18	11.31
Natural Gas and Oil Systems	1.17	1.35	1.47
Gross Emissions	**184.74**	**150.08**	**138.28**
Net Carbon Sinks - LULUCF**	-32.66	-34.03	-34.03
Net Emissions	**152.08**	**116.06**	**104.25**
Estimated Reduction in Net Emissions from 2005		23.7%	31.4%

Note: Totals may not equal exact sum of subtotals shown in this table due to independent rounding.
* Emissions associated with on-site fuel combustion activities in the Residential, Commercial, and Industrial sectors.
** Land Use, Land Use Changes and Forestry

Note – percentage reductions are calculated based on net emissions

DEQ NORTH CAROLINA Department of Environmental Quality

troutman sanders

Executive Order No. 80: Largely A State Effort

- Executive Order No. 80 is aspirational and directed towards actions the state can take to achieve further reductions.
- 13 million metric tons to go!
- Potential Threats to Projected 2025 Reductions
  - Rollback of CAFE standards for model years 2021-2026
  - Projected effects of replacement of Clean Power Plan with the Affordable Clean Energy Rule

Topics

Science Advisory Board

Methyl Bromide

Chemours Consent Decree and Modified Title V Permit

North Carolina Executive Order 80 / Climate Change

Odds and Ends

Odds and Ends

Rules readoption is still ongoing.

- January 29, 2019 – Completed public hearing on Group 4 readoption (Patriculates from fugitive dust emissions, odors and open burning)
- Fall 2019 – Group 5 (Monitoring and recordkeeping for fugitive dust emissions, RMP, Source Testing)
- Winter / Spring 2020 – Group 6 (Emission control standards, VOCs, NOx)

SSM SIP Call – new language inserted to make "director discretion" provision ineffective if EPA ultimately withdraws the SIP Call or if the SIP Call is unltimately invalidated.

Regional Haze – planning is underway for 2021 submission, but EPA still hasn't issued revised guidance it promised. Note that NCDEQ intends to consider need for additional reductions in light of the progress already made.

Contact Information

Sean M. Sullivan

Troutman Sanders LLP

305 Church at North Hills Street

Suite 1200

Raleigh, NC 27609

(919) 835-4173

sean.sullivan@troutman.com

troutman sanders