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The Maine DEP issued their report "Measurement and Control of Emissions from Aboveground Petroleum Storage Tanks", as directed by LD 1915 initiated by Rebecca Millet. This bill and report were in response to the civil lawsuit brought by the USEPA and USDOJ against Global Companies in 2019, based on Global's operations and air emissions at their bulk petroleum storage facility in South Portland. A similar lawsuit was subsequently filed in 2020 against Sprague Resources' South Portland facility.

Global is only one company, but the sequence of events, the lawsuit, and the subsequent follow-up by the DEP are illustrative of how the DEP permits, monitors, regulates and enforces Maine air regulations and the state's implementation of the federal regulations as required by the Clean Air Act. In essence, because the Maine DEP was not monitoring Global's activities sufficiently, the USEPA in 2012 and 2013 required compliance testing by Global, found them in violation, and together with the USDOJ filed a civil suit against Global. When this lawsuit became public in 2019, the DEP's response was to say that they felt there was not an issue, they disagreed with the testing approach, and that Global was in compliance with their permit. In contrast to the USEPA, it appears that the DEP takes an extremely lenient approach to applying the regulations of the Clean Air Act.

The chronology of these events is summarized as follows:

- 1) The USEPA began looking at VOC emissions in the South Portland area due to high ozone levels, as VOC emissions can degrade to form ozone.
- 2) In the years prior to 2012, Global reported no emissions from any of its storage tanks, apparently claiming the stored products had no emissions.
- 3) As required by the USEPA in 2012 and 2013, Global completed emissions testing from two heated tanks containing asphalt and heavy oil, and found they had the potential to emit volatile organic compounds (VOCs) at a rate greater than 50 tons/year, making them a major source, and were in violation of their permit.
- 4) After site emissions testing, Global's own emission estimates went from zero to a peak of 20.59 tons/year in 2015; these estimates were calculated by Global and reported to the DEP.
- 5) Global, like all bulk petroleum storage facilities, reports its own estimate of what they think their VOC emissions were for the previous year on a yearly basis. They use a method referred to as "AP-42" which was developed by the American Petroleum Associations (API). This method uses numerous assumptions and standard parameters to estimate discharges, and the results can vary widely from actual emissions. The DEP relies on these self-reported estimates of emissions to determine the facilities compliance with their permit limits.
- 6) The DEP, in conjunction with the City of South Portland, installed ambient air monitoring stations at five locations within the city in 2019. But the stations were located relatively far away from the bulk petroleum storage facilities, and residents in the immediately adjacent neighborhoods still have no data to demonstrate the air is safe to breathe. Instead, these residents are still subject to what the DEP and industry refer to as "nuisance odors" of unknown chemical composition.

Nine years after the USEPA stepped in and required site testing to determine emissions, and two years after it has been publicly well known, the DEP has still not investigated Global's emissions, collected additional samples, or scrutinized Global's reported emission estimates. In addition, after two years, the on-going ambient air monitoring program in South Portland has not gathered any useful data in the residential areas adjacent to these facilities.

More needs to be done to address the lenient over-sight and enforcement of the existing air regulations by the DEP and how they are implemented. It appears there may be existing regulations that could be used to address these issues, but a substantial change by the DEP in approach and perspective is needed, and it seems like nothing will change without additional legislation. Operational changes and/or legislation should focus on the following topics:

- 1) Establish permits limits for cumulative discharges of VOCs and hazardous air pollutants (HAPs) using health-based metrics protective of adjacent residential populations.
  - a. Current ambient air standards regulate particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, and ozone. VOCs and HAPs are not regulated under these ambient air standards, they are regulated only as part of the facilities discharge permit on a tons per year discharge basis. VOC and HAP concentrations and associated potential health impacts on adjacent populations are not taken into account when establishing these permissible discharge limits.
  - b. A risk assessment of potential health impacts should be completed using the USEPA's HEM-3/HEM4 air model to evaluate and determine acceptable air discharge limits for one or more facilities.
  - c. The model would use the cumulative effects of multiple and adjacent VOC and HAP emission sources to evaluate potential human health effects.
- 2) Complete perimeter air monitoring at facilities with significant VOC emissions to demonstrate compliance with the health-based permit limits and show that the facilities emissions do not cause an exceedance of the ambient air guidelines established by the

Maine CDC.

- a. A monitoring program at the perimeter property limit shall monitor ambient air using approved methods such as USEPA 325 or other approved and suitable method.
  - b. Monitoring should be completed by a qualified independent third party paid by the facility, with regular reporting to the DEP and the local municipality.
- 3) Demonstrated compliance with these emissions limits should be the responsibility of the facility, and corrective measures with changes in operations and/or emission control technology shall be implemented to obtain compliance with these limits.
- a. Existing facilities may need to be updated with new infrastructure to contain and/or treat its emissions. It does not make sense that "grandfathered" facilities built in 1940 should be allowed to emit pollutants simply because they always have.
- 4) Air is a community resource shared and used by all and needs to be protected.
- a. Any assessment of cost for increased DEP staff to apply these regulations and/or for upgrading a facility to contain their emissions should take into account the total societal cost of potentially emitted pollutants. For example, if emissions have the potential to cause ten cancers per year, and the cost to treat those cancers averages \$150,000/cancer, then the potential total societal cost is \$1,500,000/year. From a societal perspective, air pollution does not make economic sense.