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ATTN: DEP Docket No. 02-21-01
NJ Department of Environmental Protection
Office of Legal Affairs
Mail Code 401-04L; PO Box 402
401 East State Street, 7th Floor
Trenton, NJ 08625-0402

Subject: Written Public Comment on Docket No. 02-21-01 -- Rule Proposal and State Implementation Plan Revision: Permit and Reporting Requirements for Fumigants and Other Hazardous Air Pollutants

Dear Ms. Previte:

On behalf of the Association of Environmental Authorities of New Jersey (AEA), I appreciate the opportunity to provide comments on the proposed Permit and Reporting Requirements Rule, specifically on the components concerning the listing of hydrogen sulfide (H_2S) as a New Jersey Hazardous Air Pollutant (NJHAP). The proposed rule seeks to list H_2S (which is not listed as a federal HAP) as a NJHAP and, consequently, impose restrictive limits that would significantly affect our members without a reciprocated regulatory or public health benefit. The AEA is a trade association of publicly owned government agencies and private-sector businesses that provide or support clean water and solid waste utility service in New Jersey. AEA strives to ensure cost-effective regulations that will be beneficial to New Jersey communities. Consistent with the mission of AEA, the Association shares NJDEP's concerns regarding the proper management of H_2S that may occur as a result of wastewater and solid waste operations.

Our review of the proposed action concluded that it is not necessary from either public health or ecological protection viewpoint. Existing state programs that primarily focus on odor-based H_2S regulation to ensure low ambient concentrations where public exposures might occur are more than sufficient to ensure the proper regulation of this parameter. The proposed HAP reference concentration at 2 $\mu g/m^3$ (long-term average), on the other hand, will cause unnecessary expenditures on control equipment and public health impact analyses, when, in actuality, there is

no real-world, discernable public health threat present. At a minimum, rational H_2S regulation would require the adoption of a long-term ambient criteria 15-20 times higher than the proposed rule. For this reason, it is respectfully requested that DEP reconsider the need for this regulatory action and conduct the more detailed and appropriate technical, risk assessment and economic impact assessments that would more objectively demonstrate the need for (or lack thereof) for any additional H_2S regulation. We also urge the DEP to request peer review of its assessments through its Science Advisory Board (https://www.nj.gov/dep/sab/members.html) which, according to the DEP website, "will, at the Commissioner's request, provide independent peer review and advice on scientific and technical issues relevant to the DEP's mission."

AEA looks forward to working with NJDEP to resolve the concerns regarding the proposed rule that we believe may affect our members while ensuring public health is protected appropriately. The following provides additional details regarding the basis of our comments.

Background on Regulation of H_2S

The NJDEP proposed rule is seeking to list H_2S as a NJHAP and use that listing to impose stringent HAP requirements including a 90-lb/yr Reporting Threshold and associated Reference Concentrations. H_2S was originally on the United States Environmental Protection Agency's list of 189 federal HAPs in 1990. However, the agency concluded that the inclusion of H_2S as a HAP was inadvertent and consequently, Congress removed H_2S from the HAP list with Presidential approval in 1991.

Under NJDEP's current air regulations and any corresponding Title V Air Pollution Control Operating Permit issued to a regulated entity, an H_2S emission limit is imposed to protect the surrounding community from odors. *See* N.J.A.C. 7:27-5.1 (prohibits odor emissions that would "unreasonably interfere with the enjoyment of life or property" beyond the facility's property line). Additionally, NJDEP's Technical Manual 3001 establishes a short-term (1 hour average) H_2S odor detection level of 11 $\mu g/m^3$which is well below any short-term exposure level that could cause harm to the local populace.

Objections and Concerns with Proposed Rule

AEA understands that the Passaic Valley Sewerage Commission has conducted detailed analyses on the scientific need and regulatory impact of the proposed rule. We support those comments submitted by PVSC and the associated analyses and hereby incorporate them by reference. Additionally, our review noted the following objections and concerns with the proposed rule.

1. **<u>H_2S is Currently Adequately Regulated Under NJDEP Air Regulations</u>**

Based upon NJDEP's current air regulations, regulated entities (such as wastewater treatment plants and other facilities) are required to protect against odor impacts of H_2S at the property line. *See* N.J.A.C. 7:27-5.1 and NJDEP's Technical Manual 3001. The "odor threshold" for humans is less than 1 part per billion of H2S. "*Humans are extremely sensitive to hydrogen sulfide odors and can smell such odors at concentrations as low as 0.5 to 1 part per billion (ppb)."* - -ATSDR - Landfill Gas Primer - Chapter 3: Landfill Gas Safety and Health Issues (cdc.gov). It is recognized that the health effects associated with H_2S (*i.e.*, irritation of the eyes

and mucous membranes) *only can occur* at concentrations that are *significantly higher than its odor threshold*. Consequently, as the current regulatory requirements already adequately regulate for odor control, and therefore, fully protect against the public health impacts of H_2S, the proposed additional restrictions on H_2S are not necessary.

2. **Target NJHAP Requirements for H_2S Are Not Based on Most Recent Federal Health Risk Studies**

NJDEP has based the proposed H_2S regulatory benchmarks on EPA's 2004 Integrated Risk Information System (IRIS). This is a dated and unreliable scientific assessment that was subsequently modified based on updated information and more reasonable analyses.In 2016, based upon the same study used to derive EPA's reference concentration, the Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the literature on H_2S in the Toxicological profile for H_2S. Based upon the same information and data, ATSDR derived a federal minimal risk level of 29 $\mu g/m^3$ for intermediate term exposure of *two weeks to a year* and declined to identify a chronic long-term exposure level. Consequently, the more recent risk level assessment utilizing the same data used by EPA to derive the reference concentration is more than an order of magnitude higher than EPA's reference concentration. If NJDEP were to consider the more recent federal health risk studies, those studies would suggest that the health-based thresholds should be one to three orders of magnitude higher than NJDEP's proposal (the ATSDR reports showed that the lowest level which observed health effects in humans or animals is approximately 2,900 $\mu g/m^3$ – nearly three orders of magnitude higher than EPA's H_2S reference concentration).

3. **Regulatory Mass Emission Triggers are Too Conservative and Will Misdirect Resources**

A review of the regulation of H_2S in states that appear to have a similar industrial presence in the State (*e.g.*, California, Delaware, New York, Rhode Island, Pennsylvania), no other state has a reporting threshold even remotely similar to the 90-lbs proposed by NJDEP. Assessment of emission rates anticipated at wastewater facilities (conducted by PVSC) indicates that virtually every wastewater facility above 1 MGD would exceed this reporting threshold for several wastewater components. This would trigger the need for (1) more control equipment or (2) more detailed air quality modeling – even though such facilities have no odor issues – verifying that the proposed regulatory program will grossly overpredict the incidence of circumstances where H_2S control is a realistic concern.

Additionally, the reference concentration of 2 $\mu g/m^3$, selected based upon EPA's Integrated Risk Information System (IRIS), is significantly more conservative than those in any other state.This reference concentration is two orders of magnitude lower than the ATSDR levels below which negligible health impact is expected.*See* detailed state-by-state analysis of H_2S regulation in PVSC Comment Letter. The fact that no other state has regulated H_2S to this level provides confirmation that the proposed rule is not regulating the correct human health impact concentration. The reporting threshold was not developed in a manner that is representative of the type of operations at the treatment facilities and was developed using overly conservative modeling assumptions.Moreover, the establishment of this threshold (which is similar to the

human odor threshold), will grossly overregulate sources such as landfills which emit H^2S as part of the biodegradation process for organic materials encapsulated. Landfill H2S emitting sources are defined by an area source (i.e., emissions not coming from a defined stack), whereas the reporting threshold was based on modeling of a point source (stack).

Dispersion modeling done as a result of applying the 90 lbs. reporting threshold for HAPs would likely result in the need to place domes to capture and treat emissions from such sources. The resulting cost, for landfills alone, would easily be in the hundreds of millions of dollars. Such costs are not reasonable where there is no actual record of significant public health impacts associated with such operations.

4. NJDEP Failed to Conduct a Regulatory Impact Assessment

As noted above, the impact of this proposed rule, if adopted, would be incredibly far reaching. The rule as proposed would have a significant impact on any plant that is greater than 1 million gallons per day (MGD). At least 55 AEA members would be directly impacted. Any plant that is over that 1 MGD threshold would have H_2S emissions that would be expected to trigger detailed and costly assessments in order to comply with the NJHAP requirements of H_2S. Attached is a list of the AEA members that are above 1 MGD that would be severely impacted by this rule. (Enclosure). These facilities do not, in general, have odor complaints, and, if they do, they are transient. Such real world, operations records verifying that the proposed rule is unnecessary.

While the proposed rule will have a significant economic and regulatory impact on many AEA members and even more facilities throughout the State of New Jersey, NJDEP did not conduct any meaningful economic impact analysis or regulatory impact assessment on this proposal. Such an impact analysis is required by state law for adopting new rules. If NJDEP were to have conducted a cost/regulatory impact analysis, it would be clear that the proposed H_2S Reporting Threshold and Reference Concentration would result in excessive economic expenditures that would not provide any further public health benefit beyond the existing odor control requirements. These costs would cause unnecessary resource expenditures that will take away from other more important investments in public health and safety.

Request for Withdrawal of Proposal and Peer Review Prior to Republication of H^2S of Any Revised Rule Proposal

Based upon the above objections and concerns, promulgating new, stringent, NJHAP requirements for H_2S will have an unintended, sweeping and significant economic impacts on AEA members without any corresponding public benefit beyond the benefit provided by the existing H_2S odor controls. Moreover, the public will be misled regarding the health consequences of WWTP and landfill operations if this rule is adopted. Consequently, AEA requests that NJDEP withdraw the proposal to list H_2S as a NJHAP. It is also apparent that the best available scientific information was not considered or appropriately applied in developing this regulatory proposal. Given the widespread impact of this rule, an independent j review should be initiated to determine (1) what is the relevant human health exposure of concern, (2) what trigger emissions are appropriate to avoid over regulation of H^2S sources and (3) whether existing regulatory controls for odor are sufficient to address public health impacts from this

parameter. In addition, a framework for control of H_2Sin wastewater treatment facilities needs to be established. Currently there is no such framework. There is no manual associated with the control of H2S from wastewater treatment facilities.

We look forward to working with you to reconsider the approach to regulating H_2S emissions in New Jersey to appropriately protect public health while not imposing unduly restrictive limits upon AEA member facilities and other similarly situated facilities throughout New Jersey.

Sincerely,

Peggy Gallos
Executive Director

Cc: AEA Board of Directors

https://www.nj.gov/dep/sab/members.html