

## Answers to some additional questions raised during the webinar

### Regulatory

#### ***How are air quality permits decided in New York? What is the difference between a Title V and an Article 10 permit?***

For each major stationary source facility, as defined in 6 NYCRR Part 201, DEC issues a Title V Facility Permit, a comprehensive permit containing all regulatory requirements applicable to all air emitting sources at the facility. In general, the requirements contained in air quality permits issued by DEC are dependent on the types of sources in operation at the facility, the applicable federal and state regulations that pertain to those sources, and an evaluation (or consideration) of impacts that the sources may have on the surrounding area.

Article 10 provides for the siting review of new and repowered or modified major electric generating facilities in New York State by the Board on Electric Generation Siting and the Environment (Siting Board) in a unified proceeding instead of requiring a developer or owner of such a facility to apply for numerous state and local permits.

#### ***Who do you notify if you suspect a facility may be violating their air permit?***

If the public suspects a facility is in violation of their air permit, contact your [regional office](#) with the details of the issues observed.

#### ***How did EPA choose the six criteria air pollutants for which National Ambient Air Quality Standards (NAAQS) are established?***

Two sections of the Clean Air Act (CAA or “the Act”) govern the establishment and revision of the NAAQS. Section 108 ([42 U.S.C. 7408](#)) directs the Administrator to identify and list certain air pollutants and then to issue air quality criteria for those pollutants. The Administrator is to list those air pollutants that, in his/her “judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare”; “the presence of which in the ambient air results from numerous or diverse mobile or stationary sources”; and “for which . . . [the Administrator] plans to issue air quality criteria . . .” Air quality criteria are intended to “accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of [a] pollutant in the ambient air . . .” [42 U.S.C. 7408\(b\)](#). Section 109 ([42 U.S.C. 7409](#)) directs the Administrator to propose and promulgate “primary” and “secondary” NAAQS for pollutants for which air quality criteria are issued.

Section 109(d)(1) requires that “not later than December 31, 1980, and at 5-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 108 and the national ambient air quality standards . . . and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate. . . .” Section 109(d)(2) requires that an independent scientific review committee, “shall complete a review of the criteria . . . and the national primary and secondary ambient air quality standards . . . and shall recommend to the Administrator any new . . . standards and revisions of existing criteria and standards as may be appropriate . . . .” Since the

early 1980s, this independent review function has been performed by the Clean Air Scientific Advisory Committee (CASAC).

Reviewing the NAAQS is a lengthy process that involves many phases to implement. Information on the phases of the National Ambient Air Quality Standard review process can be found at <https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards>.

***Does a process for considering additional pollutants exist and how does it work?***

The process for considering additional pollutants would follow the same process that was used to establish the current National Ambient Air Quality Standards. Unlike the other criteria pollutants, air quality criteria had not been issued for lead (Pb) as of the enactment of the Clean Air Act of 1970, which set forth the requirement to set the NAAQS based on the air quality criteria. It wasn't until 1976 that the EPA published a notice in the Federal Register that Pb had been listed under section 108 as a criteria pollutant, and in 1978 the EPA promulgated NAAQS for Pb under section 109 of the Act.

***Has the EPA considered establishing National Ambient Air Quality Standards (NAAQS) for PFAS and VOCs?***

EPA's researchers and partners across the country are working hard to answer critical questions about PFAS. In October 2021, Administrator Regan announced the Agency's PFAS Strategic Roadmap, laying out a whole-of-agency approach to addressing PFAS. The roadmap sets timelines by which EPA plans to take specific actions and commits to bolder new policies to safeguard public health, protect the environment, and hold polluters accountable. The Office of Air and Radiation is currently working on building the technical foundation to address PFAS air emissions to identify sources, develop and finalize monitoring approaches for stack emissions and ambient air, develop information on cost-effective mitigation technologies, and increase understanding of the fate and transport of PFAS air emissions—to inform potential regulatory and non-regulatory mitigation options. To learn more about the actions the EPA is taking to address PFAS, you can visit <https://www.epa.gov/pfas/key-epa-actions-address-pfas>.

VOC emissions from the use of consumer products can cause or contribute to ozone levels that violate the national ambient air quality standards (NAAQS) for ozone. Ozone is a major component of smog, which causes negative health and environmental impacts when present in high concentrations at ground level. EPA sets emission standards for certain consumer products to reduce VOC emissions. For more information about this regulation, you can visit <https://www.epa.gov/stationary-sources-air-pollution/consumer-products-national-volatile-organic-compound-emission>. In addition, states have adopted regulations that require facilities to reduce VOC emissions. These emissions can be reduced by making process changes (such as switching to low VOC content coatings) or by installing air pollution control equipment (such as carbon adsorbers or incinerators). State VOC regulations must at least meet a level of stringency we call RACT, or Reasonably Available Control Technology. RACT is defined as the lowest level of emissions that can be achieved, taking into account technical and economic considerations. Control Techniques Guidelines (CTGs) are issued by the EPA and provide recommendations to inform state and local air agencies as to what constitutes RACT for a specific VOC Source Category. For more information on CTGs, visit <https://www.epa.gov/ground-level-ozone-pollution/control-techniques-guidelines-and-alternative-control-techniques>.

## Community Protections

### ***What action steps can individual people, including those living in rural areas with limited access to public transportation or municipal electric for home heating, take to protect themselves on poor AQI days?***

Taking small steps like avoiding time outside, reducing physical activity that may lead to heavy breathing or exertion, and closing windows will help protect individuals from the negative health effects during periods of poor outdoor air quality. More information can be found on the EPA AirNow guide: [https://www.airnow.gov/sites/default/files/2021-03/air-quality-guide\\_pm\\_2015\\_0.pdf](https://www.airnow.gov/sites/default/files/2021-03/air-quality-guide_pm_2015_0.pdf)

### ***When should residents close their windows due to poor air quality?***

Outdoor air can enter homes through windows or other openings in a home (US EPA, 2024a). When your local Air Quality Index (AQI) is more than 50, at which point “unusually sensitive groups” may be impacted, you may consider closing windows, which may help reduce exposure to outdoor pollution (US EPA, 2015). Keeping windows closed when winds are low and temperatures drop will also help prevent outdoor air pollution from entering the home.

### ***Are NYS schools required to have any physical activity plan(s) that considers current NYS AQI levels?***

The NYS DEC provides a daily AQI forecast and general guidance regarding outdoor activity for the various AQI levels. Some municipalities may have developed additional guidance for their school districts. NYC has developed recommendations based on AQI for child care, schools, and day camps: <https://www.nyc.gov/assets/doh/downloads/pdf/eode/aqi-guidelines-children.pdf>. This information is similar to what DEC and EPA include when describing the AQI levels.

### ***How can schools obtain AQI flags?***

Details about EPA’s AQI Flag Program and information about ordering flags can be found here: <https://www.airnow.gov/air-quality-flag-program/>

## Monitoring Data

### ***What pollutants and levels of pollution do low-cost air monitors detect?***

Most low-cost air pollution monitors sold in the U.S. are designed to detect gases or particles in the air such as particulate matter (PM), radon, carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), formaldehyde, volatile organic compounds (VOCs), or environmental factors such as temperature and humidity (US EPA, 2024b). Generally speaking, low-cost air quality monitors can detect air pollutants across the range of human health effects. For instance, low-cost PM monitors can detect particulate matter across the entire EPA AQI scale. The low cost comes with other tradeoffs however, including reduced precision and accuracy or greater interference from weather conditions such as humidity. Additionally, some monitoring technologies lack specificity. For example, low-cost VOC sensors can report when VOC levels are elevated but not what individual

compounds the sensor is responding to. This makes determinations of health risk difficult based on data from low-cost VOC sensors.

***How do low-cost monitors, such as PurpleAir monitors, compare to regulatory air monitors, and how does the EPA or DEC use data from these low-cost monitors?***

While air sensors are useful for providing general information about air quality, air sensors have a number of limitations that could include occasionally reporting questionable data points and a bias that may result in data that systematically over- or under-estimates the actual pollutant concentration. Work is ongoing to better understand the data output of sensors and developing methods (i.e., correction factors) to bring them closer to regulatory instruments. [EPA's Enhanced Sensor Guidebook](#) is a great resource for anyone who wants more information about understanding sensor results and their performance.

Regulatory monitors are designated as either Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitors. These monitors must meet strict operating and performance measurements, as outlined in the U.S. Code of Federal Regulations (40 CFR Parts [50](#), [53](#), and Part [58](#)). Reference monitors produce high-quality, accurate data that can be used to determine compliance with the National Ambient Air Quality Standards. Air sensors are generally lower in cost, more portable, and easier to operate than regulatory monitors. They are not subject to the same strict operating and performance requirements. The accuracy, lifetime, and reliability of air sensors varies due to several different factors. The different air sensor components, environmental conditions, and methods of operation may impact an air sensor.

The EPA incorporates air sensor data on the [AirNow Fire and Smoke map](#). The Fire and Smoke Map includes data from air sensors, which helps provide information about air quality in areas where there are no official air monitoring stations. The air sensor data is not used for regulatory purposes; however, air sensors can be valuable for providing general information about air quality.

***How can you find out what pollutants are being emitted from a particular site?***

Pollutants regulated by New York State can be found for permitted facilities on [this interactive map](#) called DEC Info Locator and [this online database](#) called Open Data NY. Facilities that do not require a permit are not included in these resources.

***What type of continuous air quality monitoring equipment is installed by EPA or NYS DEC in the vicinity of the large facilities?***

The DEC does not generally locate monitoring equipment to target large facilities. DEC uses Federal Reference Methods or Federal Equivalent Methods for air quality measurements (NAAQS) throughout the state. In addition, DEC measures many non-NAAQS pollutants, using appropriate instrumentation and following EPA requirements.

Within New York, the New York State Department of Environmental Conservation (NYSDEC) is responsible for the state's air monitoring network and reporting the data. Specific information on the NYSDEC air monitoring network can be found in their [2023 Annual Monitoring Network Plan](#). You can view current air quality information from NYSDEC air monitoring stations at <http://www.nyaqinow.net/>.

***Does the NYS DEC measure aluminum, barium, chromium, and strontium?***

Chromium is regulated as a Hazardous Air Pollutant (HAP) under the 2012 National Emission Standard for Hazardous Air Pollutants (NESHAP) (NY DEC, n.d. -b). Barium and Chromium are only regulated as soil pollutants under the “Petroleum-Contaminated Soil Guidance Policy” on the “Hazardous Waste Regulatory Levels for Toxicity Characteristic” list (NY DEC, n.d. -a). The NY DEC does not measure aluminum or strontium emissions.

***Where can my organization find a NY State Certified Lab to do air sampling and analysis near landfills?***

You can search for NY Accredited Environmental Laboratories here:

<https://apps.health.ny.gov/pubdoh/applinks/wc/elappublicweb/>. The New York State Department of Health’s Wadsworth Center certifies “laboratories performing environmental analyses on samples originating from New York State . . . in the following fields of accreditation: Air and Emissions, Drinking Water, Non-Potable Water, and Solid and Chemical Materials” (NY DOH, 2023).

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