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Massachusetts 2018 Air Monitoring Network Plan Response to Comments July 22, 2019

MassDEP operates a network of 21 ambient air quality monitoring stations at locations across the Commonwealth as part of a comprehensive program to provide information about air quality to the public and to determine compliance with National Ambient Air Quality Standards (NAAQS). Each year, MassDEP is required to submit to the U.S. Environmental Protection Agency (EPA) an Air Monitoring Network Plan in accordance with Title 40 CFR Part 58.10. On November 14, 2018, MassDEP published a draft 2018 Network Plan for a 30-day public comment period. MassDEP received comments on the draft Network Plan from EPA and from several citizens and local officials. MassDEP has summarized and responded to these comments below.

EPA's Comments

- 1. Comment:** Page 5, Ozone Network – We understand that MassDEP established an ozone monitor at the new Chelmsford Near Road site. We understand MassDEP's interest in this information but it appears that this monitor does not meet Appendix E of Part 58 relative to spacing from roadways for ozone monitors.

Response: MassDEP installed an ozone monitor at the Chelmsford near-road site (25-017-0010) to provide a useful comparison to the ozone monitor at the North Chelmsford site. The North Chelmsford ozone monitor meets the requirements in Appendix E of Part 50 and MassDEP will continue to use data from the North Chelmsford monitor for determining compliance with the ozone National Ambient Air Quality Standards.

- 2. Comment:** Page 6, Sulfur Dioxide (SO₂) Network – We are pleased that MassDEP has established a new location for the new Springfield monitoring station due to the potential sale of the Liberty Street property and began monitoring as of May 2018. As we have previously noted, MassDEP should consider disinvesting in low value SO₂ monitors and ensure all remaining SO₂ monitors measuring low concentrations are appropriate for the task (i.e., "trace" if measuring low concentrations).

Response: In the final Plan MassDEP has clarified that it currently operates trace-level SO₂ monitors at all of its SO₂ monitoring locations.

- 3. Comment:** Page 9. PM₁₀. We note and agree with the closure of the Liberty Street PM₁₀ monitor once the relocated site is fully operational.

Response: MassDEP acknowledges EPA's agreement with closing the Liberty Street site since the new Springfield site began operating in May 2018.

- 4. Comment:** Page 10. PM_{2.5} Network – On January 15, 2013, EPA revised the PM_{2.5} standard. In that rule, EPA also established that all continuous PM_{2.5} FEM monitors operating for more than 24 months should be used for comparison to the NAAQS unless a State specifically requests that the data to be excluded under 40 CFR 58.11(e) and EPA approves that request. All of MassDEP's BAMs have a Federal Equivalent Method (FEM) designation. We are pleased that MassDEP will use data from all its FEM monitors for comparison to the NAAQS.

We note that there are number of potential resource saving opportunities relative to the PM_{2.5} network, particularly for filter-based FRMs, if the continuous FEM were considered the primary monitor at the site (for quality assurance purposes). We strongly recommend that in all cases where a FEM (BAM) is operating, that it be identified as the "primary" monitor. This will allow you to eliminate or reduce the frequency of FRMs that are required. We are pleased that MassDEP will reduce some of the 1 in 3-day FRM sampling frequencies to 1 in 6-day sampling to achieve resource savings. We also acknowledge that MassDEP plans to identify a replacement site for the North Street site. That said we approve that closure without condition in our Network Plan approval dated May 9, 2018.

We are pleased that MassDEP has established a new continuous PM_{2.5} monitor in the Pittsfield CMSA (25-003-0008). (We note the language on page 10 in this regard is a little confusing, as it refers to a new ozone motioning site in the context of discussing PM_{2.5}.) We understand that the existing city of Pittsfield locations may be closed now that this location has been established.

Response: MassDEP has identified its FEM PM_{2.5} monitors as the "primary" monitors and is using those monitors for NAAQS compliance. MassDEP will continue to evaluate opportunities to rely more on continuous FEM monitors and reduce filter-based monitoring as EPA has recommended. MassDEP has corrected the ozone typo in the PM_{2.5} discussion.

- 5. Comment:** Page 12. Lead – We acknowledge that MassDEP plans to continue lead monitoring at the Boston – Harrison Ave NCore site under the NATTS program. We believe it should specifically state that lead is being collected for non-NAAQS purposes.

Response: MassDEP has clarified that lead is being monitored for non-NAAQS purposes.

- 6. Comment:** Page 13. Total Reactive Nitrogen (NO_y) – As you requested and approved by EPA, MassDEP will be operating its required PAMS site at Lynn. 40 CFR Part 58 Appendix

D, paragraph 5(b) requires that all required measurements occur at this location including NO_y.

Response: MassDEP will ensure the PAMS site at Lynn meets the requirements stated in 40 CFR Part 58 Appendix D, paragraph 5(b), including NO_y.

7. **Comment:** Page 13. Air Toxics – We acknowledge that MassDEP began a focused air toxic monitoring study in the Fore River Basin area in Weymouth, Braintree, Quincy, and Hingham as directed by the Massachusetts Department of Public Health. EPA is interested in more information about this study, and its results.

Response: MassDEP conducted air toxics monitoring from July through November 2018 as part of a health impact assessment (HIA) in the Fore River Basin area. The results are contained in the HIA Report that was published in January 2019 and which is available at <https://www.mass.gov/service-details/algonquin-natural-gas-compressor-station-weymouth>.

Comments Requesting Air Monitoring Station in the Fore River Basin

MassDEP received many similar comments from citizens and local officials expressing opposition to the proposed natural gas compressor station in Weymouth and requesting that MassDEP establish a permanent monitoring station in or within close proximity of the Fore River designated port area to evaluate existing air quality problems. These comments are summarized below.

8. We know from peer-reviewed studies and federal agency analyses that compressor stations degrade air quality. We expect a new compressor station in an industrial port area to further degrade the poor air quality in the Fore River basin. The children and families that live in the Fore River basin already carry an undue burden of disease and should be considered a sensitive and vulnerable population that would be disproportionately affected by locally degraded air quality. In fact, Quincy Point and Germantown already have state and federal recognition as Environmental Justice areas. Moreover, community health around the Fore River designated port area is already significantly worse than the state average according to Massachusetts Department of Public Health data released as part of the ongoing health impact assessment, including pediatric and adult asthma (Weymouth), chronic obstructive pulmonary disease (COPD) (Weymouth, Quincy, & Braintree), and heart attacks (Weymouth, Quincy, & Braintree). We know that degraded air pollution will negatively affect these conditions and pose undue burdens on the families who suffer from these illnesses. Having an air monitoring station in the area would allow all parties to make better decisions regarding the industrialization of the area, gain insight into current connections between air quality and public health, gain insight to the sources of odor nuisances due to elevated particulate matter with weather patterns, and better understand and protect the public's health from any emissions from the proposed compressor station if built.

In response to this public health threat to vulnerable populations, we ask you to take the following steps to monitor the environment by providing additional scientific basis of air quality. We request the following:

- Establish a long-term air quality monitoring site in the Fore River basin area inside of the designated port area.
- Include nitrogen dioxide (NO₂) monitoring in the Fore River basin. Regulatory modeling for the proposed Weymouth compressor station did not take into account marine vessel emissions, nor are they represented at any existing monitoring sites. Marine vessel sources in and around the Fore River designated port area include marinas, ferries, tugs, and ocean vessels serving port area industries. There are currently no monitoring sites to track the impact of these emissions. The monitoring should also include air toxics, ozone, lead, particulate matter, and carbon monoxide.
- Conduct long term VOC and aldehyde testing (e.g., every six days) in order to reasonably evaluate these existing air quality problems beyond the problems that were identified as part of the health impact assessment.

In addition, a recent report by the UN that says we have just 12 years to reduce our greenhouse emissions by 50%. Another recent report by the International Energy Agency (IEA), says we cannot afford to build any more fossil fuel infrastructure without imperiling our planet. To keep warming under 1.5 degrees Celsius, we need every decision-maker in every agency, including Massachusetts DEP, to resist adding fossil fuels to our energy mix. The only way to protect our children and grandchildren from the worse effects of climate change—which include food insecurity, extreme heat, more mosquito and tick-borne illnesses (such as Lyme disease), and increased antibiotic resistance to name just a few—is to deny permits to the Weymouth compressor station.

Response: MassDEP recognizes the concerns raised by citizens and local officials regarding air quality in the Fore River Basin area. As part of the Health Impact Assessment, MassDEP conducted VOC monitoring in the Fore River area from July 2018 through November 2018. The results are summarized in the Health Impact Assessment Report published in January 2019 and on MassDEP’s website at <https://www.mass.gov/service-details/algonquin-natural-gas-compressor-station-weymouth>. MassDEP is in the process of establishing a new air quality monitoring station in the Fore River Basin area, and will work with local citizens, officials and EPA in siting of the station.

Other Comments

- 9. Comment:** The proposed plan has monitoring sites throughout the Commonwealth but with a significant absence of any monitoring site in North Central Worcester County and the adjoining areas. Air quality in this part of the Commonwealth is being not monitored as thoroughly as it is elsewhere.

Response: MassDEP’s monitoring network is designed to achieve, with available but limited resources, air quality data that is representative of overall air quality in Massachusetts. The current monitoring network meets EPA’s requirements for adequate statewide coverage of monitoring stations. MassDEP operates air monitoring stations in Worcester, Greenfield, and Chelmsford and expects similar ambient conditions exist in north-central Worcester County. MassDEP does not plan to add a monitoring station in

north-central Worcester County at this time. MassDEP evaluates its network, in consultation with EPA, on an annual basis and will continue to evaluate the need air quality monitoring in Worcester County.

- 10. Comment:** Wheelabrator requested an exemption to the state of Massachusetts' new air quality standards. It is concerning that such a controversial site be given any additional leeway from MassDEP. It is assumed that air quality standards that have been set are based on science and the professional opinion of the MassDEP, with whom the public must place their trust to protect from harm. When it comes to air pollution and the potential harm that could be caused to the health of the residents in the area, MassDEP should make no exemptions to its air quality standards and hold Wheelabrator accountable to the standards that have been put forth to protect the people.

Response: Facility-specific permitting requirements are beyond the scope of the air monitoring network plan.

- 11. Comment:** The MassDEP Annual Ambient Air Quality Monitoring Network Plan should address the need for Springfield area residents to easily access air quality data. It is important for community members and organizations to be able to easily find the concentrations in our neighborhoods. The current system is complicated for researchers and not at all user-friendly for residents. In addition, there is a 6 month lag time to get the measurements—to find out the measurements of NO₂ collected last week; one must wait 6 months before the data is reposted in a final file online.

Response: MassDEP operates monitoring stations in Springfield and Chicopee and makes near real-time monitoring data and trend data available on its MassAir website (including for NO₂) at <http://eeaonline.eea.state.ma.us/dep/massair/web/#/pollution/map/max>. Historical data also is available online after it has been certified by MassDEP. If more recent raw data is needed, it can be obtained by contacting MassDEP's Air Assessment Branch at: Leslie.Collyer@mass.gov.