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Delivered via e-mail

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Re: Utah Manufacturers Association Comments on the Proposed Revisions to Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits and Change in Proposed Rule R307-110-17

Dear Mr. Bird and UDAQ staff,

The Utah Manufacturers Association (UMA) submits the following comments on the Proposed Revisions to Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits and Change in Proposed Rule R307-110-17.¹

The comments submitted herein are focused on the issue of stack testing frequency required by Part H of the Serious Area PM_{2.5} SIP for the Salt Lake City Nonattainment Area. This issue became an item of interest as part of the development of Part H during the October 3, 2018 Utah Air Quality Board (UAQB) meeting, wherein the UAQB revised the proposed SIP to mandate that all stack tests required by Part H be conducted on an annual basis.² Since the UAQB meeting, UDAQ has re-reviewed the issue and authored a “Response to Board Motion on

¹ See Utah Department of Environmental Quality, Air Quality Rule and Plan Changes Open for Public Comment, <https://deq.utah.gov/air-quality/air-quality-rule-plan-changes-open-public-comment>; 2018-21 Utah Bull. p. 134 (November 1, 2018).

² UDAQ had originally proposed to the UAQB that several stack tests required by Part H be conducted once every three years.

SIP” which explains UDAQ’s basis for proposing that certain stack tests be conducted on a three-year basis, as opposed to annually.³

Given the position taken in UDAQ’s Response to the UAQB, UMA assumes that UDAQ intends to revise Part H to re-propose stack testing once every three years for all of the units that UDAQ originally proposed to stack test on a three-year basis. UMA submits the following comment in support of UDAQ’s determination.

The purpose of stack testing is to assure compliance with emission limitations. But because stack tests are resource intensive and costly to conduct, the Environmental Protection Agency (EPA) and state regulators often develop other methods to assure sources are in compliance with applicable emission limitations.

Notably, shortly after the adoption of the 1990 Clean Air Act Amendments as the EPA implemented the Title V program, EPA promulgated the Compliance Assurance Monitoring Rule (CAM Rule). The CAM Rule established a framework to assure Title V permits contained appropriate emissions monitoring to provide a “reasonable assurance of compliance” for large sources of emissions using add on controls.⁴ Under the CAM Rule, rather than having to conduct frequent stack testing or install costly continuous monitoring devices for these large emissions units, sources monitor appropriate surrogate parameters that demonstrate effective emissions control device performance. This ensures that the devices are operating as designed and provides a reasonable assurance of compliance without an ongoing need for stack testing.

For smaller sources of emissions or for emissions sources that do not employ active control devices, periodic monitoring may be used to assure compliance with applicable limitations. Periodic Monitoring may include CAM like provisions, limits on hours of operations or fuel use or may include stack testing for larger sources.

In determining how much testing or monitoring is required to provide a reasonable assurance of compliance several principles should be considered. Stack Testing is a costly and resource intensive effort. Stack testing requires substantial up-front planning to develop and approve the test protocol, obtain bids from stack test vendors, select the stack test firm, and to coordinate test dates with production runs. For measurement of small concentrations of emissions, testing may need to be extended substantially in order to obtain a sufficient sample size for accurate results. This is important to consider and plan for on the front end of the test

³ See *id.* (providing a link to the document entitled “DAQ Response to Board Motion on SIP”), hereinafter referred to as “UDAQ’s Response to the UAQB.”

⁴ 40 CFR § 64.3(a). While EPA developed the CAM Rule for sources subject to the Title V program, the rule is instructive here as it provides an outline of how regulators and sources should go about determining monitoring necessary to reasonably assure compliance with applicable emission limitations.

since it can have a substantial impact on cost and scheduling. During the week of the stack test, a stack test vendor brings the stack test equipment and stack testing personnel to the site to measure emissions over a period of steady state operation. In addition to the stack test company resources, both site and agency resources are involved in the testing. Site resources are involved to coordinate testing and production needs, address any issues that may arise during the testing (production or other issues) and ensure that appropriate process data is collected during the testing. Agency personnel are generally present to witness the testing. Once the testing is completed, the stack test report must be completed and submitted to the agency within a specified period of time.

These are not inconsequential burdens as one member of the UAQB suggested during the October 3, 2018 meeting. As such, these burdens on both the source and on UDAQ's limited resources should be considered, particularly where there is little to be gained in terms of assuring compliance with additional stack tests.

Given all that is involved in stack testing, where other methods can be used to provide compliance assurance, those methods should be used. Again, since stack testing is a very resource intensive effort, small sources of emissions of a given pollutant should not be required to conduct stack testing to demonstrate compliance. It is more reasonable to require periodic stack testing on larger sources of emissions of a given pollutant.

In addition, stack testing should be tailored to the type of emissions generated by a process:⁵

- For combustion sources, NO_x and CO are commonly tested. There are several different methods to test NO_x and CO beyond the standard EPA methodology. Rather than requiring a formal stack test, many agencies allow a periodic instrumental measurement of NO_x and CO to demonstrate compliance.
- For clean burning natural gas-fired boilers, stack testing for particulate matter is generally not required since there are no control requirements for natural gas combustion and any emission limits on those units are generally based on AP-42 factors. Compliance can be assured by measuring fuel flow and use of an emission factor rather than testing. An UMA member required to conduct stack testing for particulate on their boiler measured PM_{2.5} to be less than 50% of the emission limit.

⁵ See 40 CFR § 64.3(c) ("In designing monitoring to meet the requirements [of the CAM Rule], the owner or operator shall take into account *site-specific factors* including the applicability of existing monitoring equipment and procedures, the ability of the monitoring to account for process and control device operational variability, the reliability and latitude built into the control technology, and the level of actual emissions relative to the compliance limitations." (emphasis added)); see also UDAQ's Response to the UAQB, p. 1 (identifying site-specific factors that the agency evaluates in determining the frequency of stack testing for the sources controlled by Part H of the PM_{2.5} SIP).

Since the purpose of stack testing is to assure compliance, when stack testing is appropriate, the frequency of ongoing stack testing should be based on the size of the emissions from that unit and how close the source is to its emission limitations. In cases where there is a large compliance margin, further testing may be unnecessary for small or moderate size sources. For large sources with a substantial compliance margin, testing once every 3 to 5 years is often sufficient to assure compliance. For large sources that operate closer to their emissions limitations, more frequent testing may be necessary to assure compliance.

UMA understands that as part of developing Part H for the Serious PM2.5 SIP, UDAQ's engineers re-evaluated the control plan for the sources identified in Part H, thereby making the site-specific determination of what stack testing was necessary and the frequency for the tests. UMA believes that is the best method to determine the frequency of stack testing as opposed to imposing a universal rule that all stack tests required by Part H be conducted annually. To further illustrate the issue, UMA provides the following example of how UMA membership would be impacted by the UAQB's proposal to increase the frequency of stack testing.

A member company is currently required to test three sources for NOx, CO, and PM2.5 once every three years. The stack testing costs \$35,000 to perform over a four-day period. However, the testing also requires two week's worth of time by the company's Site Environmental Leader and operations resources, including almost a week of preparation and another week for coordination during the week of the stack test. By increasing the frequency to require an annual stack test, the company's cost, time and resources would increase by 200% (i.e., an additional \$70,000 in costs and 4 weeks of staff effort over the current base).

These burdens could arguably be justified if there was an absence of reasonable assurance of continuous compliance. But that simply is not the case. The company re-evaluated its recent stack test results for the period between 2011 and 2018 and found that:

- In each instance, the facility tested below the NOx and CO emission limitations for all sources;
- PM2.5 emissions from the natural gas-fired boiler was less than 50% of the emission limitation; and
- PM2.5 emission from the other source tested was also less than 50% of the applicable emissions limitation.

The aforementioned review of the existing stack test results (coupled with common practices at other facilities) shows that stack testing for this facility's natural gas-fired boiler provides little benefit considering existing controls are already being followed, let alone needed on an annual basis. This is because the emissions limitation was established based on an

emissions factor and the existing stack testing has sufficiently established that accuracy of the emissions factor, and the continuous compliance with the emissions limitation.

As UDAQ can see from this example, requiring additional stack testing would simply increase the facility's operating costs and reduce time of the site environmental staff that could be used on environmentally beneficial project work, including sustainability and recycling initiatives at the site, without providing any additionally assurance on ongoing compliance.

UMA therefore requests that UDAQ revise Part H to re-impose stack testing every three years for the sources that UDAQ originally proposed for testing on a three-year basis.

Thank you for considering this comment; UMA and its members look forward to working with you and the UDAQ staff on air quality issues.

Regards,

A handwritten signature in black ink, appearing to read 'JRBC', with a long horizontal flourish extending to the right.

Todd R. Bingham, President/CEO

Utah Manufacturers Association