



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

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Ref: 8P-AR

Bryce Bird, Director  
Utah Division of Air Quality  
P.O. Box 144820  
Salt Lake City, Utah 84114-4820

RE: EPA Region 8 Comments on Utah's Proposed Part H Emission Limits/Operating Practices and BACT Analyses for the Salt Lake City Serious PM<sub>2.5</sub> Nonattainment Area.

Dear Mr. Bird:

Thank you for the opportunity to provide comments on the state of Utah's draft fine particulate matter (PM<sub>2.5</sub>) State Implementation Plan (SIP) Section IX, Part H Emission Limits and Operating Practices and the associated best available control technology (BACT) analyses for the Salt Lake City nonattainment area. These draft documents were approved for public comment by the Utah Air Quality Board on June 6, 2018, with comments due August 15, 2018. We want to acknowledge the tremendous efforts of the Utah Department of Air Quality (UDAQ) and all the work that has been undertaken on the draft Salt Lake City serious PM<sub>2.5</sub> nonattainment area SIP.


Our comments are detailed in the enclosure to this letter. Additional development and analysis of draft Section IX, Part H Emission Limits and Operating Practices, and the BACT analyses is necessary to facilitate further review of the Salt Lake City Serious PM<sub>2.5</sub> nonattainment area SIP. Region 8 will not reach any final conclusions until the state of Utah provides a formal submittal of the Salt Lake City serious PM<sub>2.5</sub> nonattainment area SIP and after we conduct our own notice and comment rulemaking.

The comments in the accompanying enclosure were generated by the Region 8 technical staff. The Region did not have time to consult with technical experts in the Office of Air Quality Planning and Standards (OAQPS). Once Region 8 has time to consult with OAQPS on the BACT limits and BACT analyses, we may have additional comments. Should we identify additional issues, Region 8 will work closely with the state to address them.

We will provide any assistance needed by UDAQ to resolve the identified issues and look forward to working with you and your staff. If you have any questions, please contact me at (303) 312-6936, or have your staff contact Crystal Ostigaard, Particulate Matter Program Manager, at (303) 312-6602.

Sincerely,

8/15/2018

 Monica Mathews-Morales

Signed by: MONICA MATHEWS-MORALES  
Monica Mathews-Morales  
Director, Air Program  
Office of Partnerships and Regulatory Assistance

Enclosure – EPA Region 8 Comments for Utah PM<sub>2.5</sub> SIP Section IX.H.11 and 12, and BACT Technical Support Documents.

## Enclosure

### EPA Region 8 Comments for Utah PM<sub>2.5</sub> SIP Section IX.H.11 and 12, and BACT Technical Support Documents.

#### Background

The EPA's August 24, 2016 rule, State Implementation Plan Requirements for Fine Particulate Matter Standards (SIP Requirements Rule), 81 FR 58010, provides the EPA's interpretation of Clean Air Act (CAA) section 189(b)(1)(B) as applied to PM<sub>2.5</sub> Serious areas. CAA section 189(b)(1)(B) requires plans for Serious areas to include "provisions to assure that the best available control measures [(BACM)]... shall be implemented no later than 4 years after the area is classified (or reclassified) as a Serious Area." The SIP Requirements Rule does not separately define Best Available Control Technology (BACT), but provides that a control measure for a stationary source that is a control technology and has been identified as BACM is considered BACT. 40 CFR 51.1010(a)(4)(i).

#### General Comments

1. The BACT analyses within the Part H Technical Support Documents (TSDs) should provide adequate support for the conclusions and for the associated emission limitations and monitoring, recordkeeping and reporting (MRR) requirements found in the Part H SIP update. Several of the TSDs note the performance potential of a given control technology, but select a less stringent emission limitation than may be attainable by a given control technology. In other cases, the TSD does not discuss how the limit (if proposed) comports to the appropriate level of control. An example is the nitrogen oxide (NO<sub>x</sub>) limit resulting from the application of selective non-catalytic reduction (SNCR) at the Lhoist North America – Grantsville Facility, where it is unclear how the mass based limit (pounds per hour (lb/hr)) is representative of the appropriate level of control. An additional example: the boilers at ATK Promontory, where the analysis identifies 9 parts per million (ppm) NO<sub>x</sub> as achievable, while the proposed Part H limitation is 15 ppm NO<sub>x</sub> without further explanation. To assist in understanding the results of the UDAQ's analysis, the EPA recommends presenting a table summarizing the BACT conclusions and the associated limits that are adopted into Part H. Where emission limitations differ from the level of control determined to be appropriate through the BACT analysis, provide a discussion supporting the selected emission limitation.
2. The identification of technologically feasible controls should include a cost table outlining the economic feasibility, including the total capital costs, annual operating and maintenance costs, and the total annualized costs (including the necessary assumptions), as well as the assumed control efficiency and tons of pollutants reduced and cost effectiveness of the control (costs per ton pollutant reduced). In some instances, only the cost effectiveness is presented, which by itself may not provide sufficient information about the economic impact resulting from a control option. For situations where small pollutant reductions are projected (e.g., less than 1 ton) the cost effectiveness (i.e., cost per ton) may greatly exceed the total capital cost, as well as the total annualized cost. Therefore, to clearly disclose the economic impact of a control technology, please provide each cost estimate that goes into the computation of cost effectiveness. Additionally, when a control technology has benefits in reducing more than one pollutant the costs should be apportioned based on the benefit per ton

of all pollutants that will be reduced by a single, or common, control technology (e.g., the cost of a common control device should be shared, or apportioned, to both PM<sub>2.5</sub> and sulfur dioxide (SO<sub>2</sub>) for common controls, such as scrubbers or wet electrostatic precipitators). We are available to discuss a procedure for doing so in more detail.

3. The EPA recommends that UDAQ consider structuring emission limitations as performance-based limits that are representative of proper operation of pollution controls. In many instances, the form of the emission limitation is expressed as a lb/hr emission rate with an averaging period less than or equal to 24-hours. The EPA commends Utah for structuring limits to be protective of the 24-hour PM<sub>2.5</sub> NAAQS. However, BACT limits are most often expressed as a numeric limit indicative of good performance of a control technology on a continuous or short-term basis (e.g. rolling 24-hour average). These limitations are typically in the form of a short-term performance based limit (e.g. pounds of emission per million British thermal unit (lb pollutant/MMBtu) for boilers and fuel burning equipment, grains/dry standard cubic foot or material processed for baghouses that do not control fuel burning equipment, ppm for turbines (potentially in combination with a lb/hr limitation), and grams/brake horsepower-hr for engines (potentially in combination with a horsepower, heat input or fuel rate, or lb/hr limitation)). Further, the EPA recommends that UDAQ consistently document how the proposed limitations reflect proper operation of the best available level of control documented in the TSDs.
4. The EPA recommends that UDAQ consider shortening stack testing frequency to once a year and/or providing additional means for ensuring emitting units and air pollution controls are operating as designed. There are many instances where stack testing is required once every 3 years. Examples include but are not limited to Big West Oil, Chevron Products Company, Compass Minerals Ogden, Tesoro Refining and Marketing Company, Procter & Gamble Paper Products Company, and the University of Utah. Such infrequent stack testing can allow poorly performing equipment to operate without detection for extended periods of time. Additionally, for sources that have not been tested and are not proposed to have periodic testing, we recommend considering methods to verify emission rates and the effectiveness of the control technology.
5. The EPA recommends clarifying stack testing frequency for the Lhoist North America - Grantsville Facility. IX.H.12.c requires compliance for the Grantsville Facility NO<sub>x</sub>, PM and PM<sub>2.5</sub> limitations through stack testing. Stack testing protocols are outlined under IX.H.11.e, but do not dictate stack test frequency. As such, it is unclear how often stack testing is to be conducted for this source. In addition, we recommend clarifying that for sources that will use stack testing, the averaging period of the limit is that of the test (i.e., 3-hour average).

### **Generic Refinery Comments**

1. The UDAQ BACT analyses for refineries, and the emission limitations selected for the sector wide limits within the SIP, conclude that BACT is equivalent to the level of control attained by 40 CFR part 60 New Source Performance Standard (NSPS) for refineries. We recommend that UDAQ analyze all potential control technologies (including those considered by the EPA when promulgating the NSPS) and determine if emission levels lower than the applicable NSPS are appropriate. In so doing, we recommend considering the incremental cost of increasing control efficiency for a control option being considered.

2. The EPA recommends UDAQ include more analysis to explain why a cost is not achievable for a particular source when control technologies are determined to be economically infeasible. Many of the discussions on refinery BACT identify the cost effectiveness of a control technology as economically infeasible without explaining what is feasible and what has been determined to be feasible in other similar situations. The analyses do not put forward any discussion on what cost has been determined to be economically infeasible, or if any analysis has been done beyond what the source presented in their submitted information.