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PROTECTING THE WEST'S LAND, AIR, AND WATER

UTAH DEPARTMENT OF  
ENVIRONMENTAL QUALITY

**OCT 31 2018**

DIVISION OF AIR QUALITY

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Re: Comments on Draft Control Measures for Area and Point Sources, Fine Particulate Matter, Serious Area PM<sub>2.5</sub> SIP for the Salt Lake City, Utah Nonattainment Area, Section IX, Part A.31 and R307-110-10. Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter

Dear Mr. Bird, Mr. Reiss and Mr. Gunter,

Thank you for this opportunity to comment on the Draft Control Measures for Area and Point Sources, Fine Particulate Matter, Serious Area PM<sub>2.5</sub> SIP for the Salt Lake City, Utah Nonattainment Area, Section IX, Part A.31 (Draft Serious SIP). I make these comments on behalf of HEAL Utah, Utah Physicians for a Healthy Environment, the Utah Chapter of the Sierra Club and Western Resource Advocates.

### **I. Commenting Organizations**

HEAL Utah promotes clean air and renewable energy, and protects public health and the environment from nuclear and other toxic threats. Representing more than 20,000 members, HEAL has a long track record of achieving positive change in the state by mobilizing local communities, promoting science-based public policy and legislation, and strategically working with regulatory agencies.

The Utah Chapter of the Sierra Club works to protect Utah's wild places, wildlife, and waters, as well as the people and communities who depend on them. Our activism and advocacy are based on our strong grassroots networks, citizen-based leadership, and the guidance and skillsets of professional staff support. With over 5,600 members, and growing, we work to protect public lands, promote renewable energy, and support initiatives that promote clean air strategies. We maintain a presence at the Utah Legislature to advocate on the full spectrum of environmental issues and amplify the voices of our members.

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Utah Physicians for a Healthy Environment is the largest community service organization of health professionals in the state of Utah. The organization and its members are health professionals, toxicologists, biologists, chemists and engineers dedicated to protecting the health and well-being of the citizens of Utah.

Western Resource Advocates is a regional non-profit conservation organization headquartered in Boulder, Colorado with programs and staff spanning the intermountain west, including Utah. Our mission is to protect the land, air and water of our region, using law, science, economics, advocacy, education, and action. To this end, we work to curb climate change and achieve environmentally sustainable management of energy, land, and water resources.

The organizations' interest in the present matter is based on the public health crisis that exists as a result of severe and frequent spikes in PM<sub>2.5</sub> air pollution that occur in northern Utah. These acute, and often long lasting episodes of high concentrations of PM<sub>2.5</sub> jeopardize the well-being of northern Utah's residents.

## **II. Analysis of the Draft Serious SIP**

### **A. The Director Must Derive and Implement BACM.**

As the Director of the Utah Division of Air Quality and the Division (collectively "Director") acknowledge, they must derive and implement "best available control measures" (BACM) in the Salt Lake City Nonattainment Area (Salt Lake NAA). *See* 81 Fed. Reg. 58010, 58080 (Aug. 24, 2016) ("A Serious area attainment plan must include provisions to implement BACM on sources in a Serious nonattainment area, as provided by section 189(b)(1)(B), no later than 4 years after reclassification."). The Salt Lake NAA was reclassified as a serious nonattainment area on May 10, 2017 for failing to attain the 24-hour PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS) by the moderate attainment date of December 31, 2019. 82 Fed. Reg. 21711 (May 10, 2017).

### **B. BACM Represents the Maximum Reduction of Emissions Achievable.**

BACM is "the maximum degree of emission reduction achievable... considering energy, economic and environmental impacts and other costs." 81 Fed. Reg. at 58081. BACM must be more stringent than the "reasonably available control measures" [RACT] the Director has previously applied in the Salt Lake NAA: "[B]est' control measures should represent a more stringent and potentially more costly level of control. The level of stringency generally refers to the overall level of emissions reductions of a control measure or technology, or of such measures and technologies combined." *Id.* "BACM puts a 'greater emphasis on the merits of the measure or technology alone,' rather than on 'flexibility in considering other factors,' in contrast to the approach for determining [reasonably available control measures] RACM and RACT." *Id.* at 58081.

### **C. BACM is “Generally Independent” of Attainment.**

In contrast to RACM, BACM/BACT are “generally independent of the attainment.” *Id.* at 58081-82; *id.* at 58082 (“interpreting the Serious PM<sub>2.5</sub> nonattainment area BACM/BACT requirements to be “generally independent” of attainment is consistent with the structure and substance of the CAA”). “BACM/BACT measures for Serious areas are not solely limited to those measures needed for expeditious attainment under this final rule.” *Id.* at 58020. Thus, the Director must derive and apply BACM independently of any need to show that the measure contributes to attainment. This is because the “robust emission reduction programs” required by BACM independent of attainment “are needed to bring about expeditious attainment and public health protection or citizens in these nonattainment areas.” *Id.* at 58082. “[I]nterpreting BACM/BACT to be generally independent of the attainment needs of a Serious PM<sub>2.5</sub> area will ensure continued progress toward attainment for those areas with more difficult air quality problems.” *Id.*

### **D. Measures Adopted in Other States Are Assumed to be Technologically Feasible.**

Repeatedly, EPA has underscored that measures adopted in other nonattainment areas are assumed to be BACM and BACT: “A state must at a minimum continue to consider as potential BACM any technologically feasible control measures or technologies implemented by similar sources.” *Id.* at 58085; *see also id.* at 58084 (“[O]ther states across the country are important sources of information about control measures.”). This is true even if those measures are costly. *Id.* at 58087 (“[A]ll states with Serious areas need to consider implementing BACM and BACT-level measures that have been implemented in other states, even if those measures incur higher costs.”). Indeed, a measure adopted in another state is presumed to be BACT and “where a given control measure has been applied in another NAAQS nonattainment area (for PM<sub>2.5</sub> or other pollutant), the state will need to provide a detailed justification for rejecting any potential BACM measure as technologically infeasible.” *Id.* at 58085.

### **E. BACM Will Be More Expensive than RACM.**

States need to consider emission reduction measures with higher costs per ton when assessing the economic feasibility of BACM and BACT controls (and, where applicable, additional feasible measures) as compared to the economic feasibility criteria applied in their RACM and RACT analysis...for the same nonattainment area.” *Id.* at 58085. Indeed, in assessing BACM, the Director may not give economic feasibility significant weight and must meet a particularly rigorous showing of economic infeasibility before rejecting a technologically feasible control. *Id.* at 58085 (“EPA maintains that while the economic feasibility of a control measure is as important as its technological feasibility under the RACM and RACT determination process, economic feasibility is a less significant factor in the BACM and BACT determination process. In other words, a state must apply a higher standard for eliminating a technologically feasible control measure from further consideration as BACM due to cost alone.”).

### III. Specific Comments

#### A. BACM for the Salt Lake NAA Is Not Legally Sufficient.

Despite these rigorous requirements, the Director failed to derive and implement BACM for the Salt Lake NAA, relying chiefly on regulations and measures adopted as RACM. The Director has repeatedly maintained that his RACM analysis and measures were sufficient. However, in so contending, the Director has **not**: 1) showed that he has developed and imposed measures for every sector that represent the maximum achievable reductions of emissions of PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors; 2) produced a complete review of measures adopted in other states; 3) established why measures adopted in other states are not technologically or economically feasible in Utah; 4) applied BACM's "higher economic costs" analysis; and 5) provided objective data to support its contentions.

Rigorous BACM analysis and the adoption of all BACM in the Salt Lake NAA is particularly warranted because the Director failed to show that the Salt Lake NAA would attain the PM<sub>2.5</sub> NAAQS by December 2019. Draft Serious SIP at 50. Given that the Director's modeling cannot show that the emission reductions required by the SIP are adequate to show attainment, the Director's refusal to adopt control strategies that are demonstrated to be technologically and economically feasible in other states is contrary to the requirements imposed by the Clean Air Act.

#### B. The Director's Contingency Measures are Inadequate and Not Supported by the Record.

According to EPA, for a Serious SIP:

Contingency measures should provide for emissions reductions equivalent to 1 year's share of reductions needed to demonstrate attainment (*i.e.*, the overall needed reductions divided by the number of years from the base year to the attainment year), or approximately equivalent to 1 year's worth of air quality improvement or emissions reductions proportional to the overall amount of air quality improvement or emissions reductions to be achieved by the area's attainment plan.

81 Fed. Reg. at 58093. Yet, the Director has made no effort to establish whether or not the emission reductions he expects the Heavy-duty Diesel Engine Emissions Reduction Programs to meet this requirement. Draft Serious SIP at 85-86. What is more, the Director has not shown that the emission reductions from the Heavy-duty Diesel Engine Programs have not "otherwise [been] relied upon in the control strategy for" the Salt Lake NAA. 81 Fed. Reg. at 58093; *id.* at 58066 (explaining that contingency measures are controls "that are not otherwise included in the control strategy or that achieve emissions reductions not otherwise relied upon in the control strategy for the area.").

### C. The Draft Serious SIP Does Not Conform to the Milestones Requirement.

The Director acknowledges that the relevant regulations “require[] quantitative milestones, which demonstrate reasonable further progress, to be achieved every three years.” Draft Serious SIP at 84. The Director also reiterates that “Not later than 90 days after the milestone comes due, Utah must submit a milestone report that certifies that the SIP control strategy is being implemented.” *Id.* As EPA explained, “Serious area attainment plans must include quantitative milestones that demonstrate RFP towards attainment to be achieved every 3 years until the area is redesignated to attainment.” 81 Fed. Reg. at 58091. Yet the Director has not complied with this requirement.

As specified by 40 C.F.R. § 51.1013(a)(4):

Each attainment plan submission for an area designated nonattainment for the 1997 and/or 2006 PM<sub>2.5</sub> NAAQS before January 15, 2015, shall contain quantitative milestones to be achieved no later than 3 years after December 31, 2014, and every 3 years thereafter until the milestone date that falls within 3 years after the applicable attainment date.

Further, a milestone report is due 90 days after the date the milestones were to be achieved. 40 C.F.R. § 51.1013(b).

Thus, the first milestones must have been achieved in the Salt Lake NAA by the end of 2017 and the report for the Salt Lake NAA came due in the first quarter of 2018. However, no such report was prepared or submitted to EPA and the Draft Serious SIP makes no effort to comply with this regulatory obligation. As a result, the Director has failed to meet his obligations to ensure that the Salt Lake NAA has achieved the relevant milestones as of 2017 and to report on this accomplishment in 2018.

Further, the Director is obligated to continue to designate, achieve and report milestones **after** the attainment date – in this case 2020 – unless the Salt Lake NAA is reclassified as attaining the standard. As EPA further explained:

[A]ll Serious area attainment plans must contain one additional quantitative milestone to be met in the 3-year period beyond the applicable Serious area attainment date. This will provide the EPA with appropriate tools necessary to continue to monitor the area’s continued progress toward attainment in the event that the area fails to attain and develops a new attainment plan.

81 Fed. Reg. at 58091. Despite this obligation, the Director has not included an additional quantitative milestone to be met beyond the attainment date. Therefore, in this way too the Director has not met the requirements of a Serious SIP submission.

Finally, the Directors statement of quantitative milestones is too vague to meet the regulatory requirements. As EPA explained:

The quantitative milestones...should be constructed such that they can be tracked, quantified and/or measured adequately in order for the state to meet its milestone reporting obligations, which come due 90 days after a given milestone date.

81 Fed. Reg. at 58064. While the Director states he “will need to track the implementation of BACM and BACT,” the mechanism he provides for accomplishing this only briefly addresses the tracking of the milestones, and further fails to provide how meeting the milestones will be measured or quantified. As a result, the SIP does not give an adequate explanation of how the public, EPA or the Director will know if the milestones have been achieved.

#### **D. The Fugitive Emissions Rule is Not BACM.**

##### **1. The Director has Not Supported His Review of the Fugitive Dust Rule with Adequate Analysis or Data.**

The Director has not provided sufficient evidence or analysis to support his contention that Utah’s Fugitive Emissions Rule, Utah Admin. Code R307-309, is BACM. The Director claims, based on mere assertion, that “[t]here are no current opportunities for additional program revisions that would lead to further emission reductions.” Salt Lake BACM at unnumbered 9. The Director seems to claim, without any supporting data or explanation, that the Utah rule is the most stringent rule in the nation, or as stringent as any rule in the country because it regulates sources as small as one-quarter acre and implements “Best Management Practices” (BMPs) Salt Lake BACM at unnumbered 7-9.

This is not adequate to determine BACM or support a BACM conclusion. Rather, the Director is required to assess the emission reductions achieved by the various state rules and compare those reductions to the emission reductions achieved by the Utah rule. Further, to justify his BACM conclusion regarding BMPs, the Director must actually compare those BMPs to Utah’s rule. Finally, the BACM analysis is incomplete because it summarizes the Director’s review without actually providing that analysis, leaving the public in the dark as to the Director’s thinking.

Moreover, Rule 309 is not BACM. The comments attached and incorporated herein – written in response to the Director’s RACM analysis of the rule and focused chiefly on fugitive dust – remain relevant to the Director’s BACM review and establish that other states have adopted regulations that are more stringent than the Utah rule. These rules also meet the further BACM mandates of enforceability, recordkeeping and reporting, while the Utah rule is not enforceable and lacks recordkeeping and reporting requirements sufficient to meet BACM.

## **2. Other States Reduce Fugitive Emissions to a Greater Degree and Otherwise Meet the Requirements of BACM.**

Finally, the following rules are more stringent than Utah's rule because they impose more strict emission limits on sources of fugitive dust:

- California's South Coast Air Quality Management District prohibits visible dust beyond the property line of the source and requires BACM. Rule 403(d)(1)(A) and (d)(2).<sup>1</sup>
- Maricopa County, Arizona prohibits visible dust beyond the property line of the source. Rule 310 at 303.1(a).<sup>2</sup>
- Clark County, Nevada prohibits a dust plume that extends 100 yards or more, horizontally or vertically, from the point of origin **and** requires best available control measures. Rule 94.11.2 and 94.9.<sup>3</sup>
- Washoe County, Nevada prohibits visible fugitive dust emissions lasting more than 5 minutes in any hour. Rule 040.030, Section C.<sup>4</sup>

Each of these rules is more stringent than the Utah rule as it puts a stricter emission limit on fugitive dust. Each rule also complies with BACM because it is enforceable. Therefore, the Director must adopt the most stringent of these rules or provide a defensible reason for not doing so. The Director must also adopt a fugitive emissions rule that requires recordkeeping and reporting sufficient to allow the public to monitor and enforce compliance with the rule.

### **E. The Director Failed to Consider Building Codes as BACM.**

Considerable NO<sub>x</sub> emissions reductions can be achieved through building codes. Yet, the Director failed to even consider measures adopting more rigorous building codes as BACM. According to a 2018 report published by the American Council for an Energy-Efficient Economy (ACEEE), energy efficiency measures, including those established within building codes, can be a significant source of emissions reductions.<sup>5</sup>

There is also precedent for these measures to be included within state implementation plans (SIPs) themselves. For example, according to the report, the "Texas Commission on Environmental Quality claimed credit for emissions reductions accruing from building energy codes of 0.72 tons per day of NO<sub>x</sub> in the 2005 Dallas-Fort Worth Increment of Progress SIP revision (263 tons/year)."<sup>6</sup> In its SIP approved in 2013, "Connecticut included energy savings

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<sup>1</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4>

<sup>2</sup> <https://www.maricopa.gov/DocumentCenter/View/5354/Rule-310---Fugitive-Dust-from-Dust-Generating-Operations-PDF?bidId=>

<sup>3</sup> [http://www.clarkcountynv.gov/airquality/regulations/Documents/SECT94\\_07-01-04.pdf](http://www.clarkcountynv.gov/airquality/regulations/Documents/SECT94_07-01-04.pdf)

<sup>4</sup> [https://www.washoecounty.us/health/files/air-quality/Current%20Regulations/040%20Prohibited%20Emissions\\_Mar%202017.pdf](https://www.washoecounty.us/health/files/air-quality/Current%20Regulations/040%20Prohibited%20Emissions_Mar%202017.pdf)

<sup>5</sup> <http://aceee.org/sites/default/files/publications/researchreports/h1803.pdf>

<sup>6</sup> *Id.*

and avoided NO<sub>x</sub> emissions from the Connecticut Energy Efficiency Fund Projects from 2003–2008 in its 8-hour ozone SIP.”<sup>7</sup> In addition, Louisiana’s SIP approved in 2005 “included efficiency upgrades for 22 municipal buildings in Shreveport. The estimated energy savings resulted in reductions of 0.041 tons of NO<sub>x</sub> per ozone season-day.”<sup>8</sup> The report also states that Utah has the potential to see emissions reductions up to 1000 tons for annual SO<sub>2</sub> emissions, annual PM<sub>2.5</sub> emissions, and ozone-season NO<sub>x</sub> emissions achieved through implementing energy efficiency programs and updating building codes.

Utah currently has only adopted the 2009 IECC residential building codes, and did not adopt the full suite of the most recent 2015 standards. Thus, there are improvements that could be made through implementation of the most recent standards.<sup>9</sup>

#### **F. The Director Did Not Consider California’s More Stringent Regulation of Non-Road Mobile Sources.**

Non-road mobile source emissions are a considerable source of NO<sub>x</sub> and VOCs and to a lesser extent PM<sub>2.5</sub>.<sup>10</sup> Emissions of pollutants from this sector could be even greater, as Utah has based its inventory on projections rather than actual data. However, rather than explore means for reducing emissions from non-road mobile sources, the Director concludes that Utah should merely rely on existing federal regulations. Salt Lake Non-Road Mobile Sources BACM. This approach is inadequate to meet BACM.

The California Air Resources Board has adopted the “In-Use Off-Road Diesel-Fueled Fleets Regulation,” 13 CCR sections 2449, 2449.1 and 2449.2.<sup>11</sup> The Rule reduces diesel particulate matter and oxides of nitrogen emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The California Rule achieves this goal by requiring fleet operators to meet a progressively more stringent combined PM and NO<sub>x</sub> standard, or to reduce emissions through technology upgrades such as retrofit or replacement. The Off-Road Regulation was initially approved by CARB on July 26, 2007 and was subsequently amended in December 2010.

EPA has determined that the Off-Road Diesel Rule constitutes the strictest regulation of non-road mobile sources and will result in NO<sub>x</sub> reductions of 7.5 tons per day by 2023. 81 Fed. Reg. 12637, 12638 & 12641 (March 10, 2016); *see also* 83 Fed. Reg. 8403 (February 27, 2018). Any state may adopt a California non-road vehicle standard. Clean Air Act 209(e)(2)(b), 42 U.S. Code § 7543(e)(2)(b).

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<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> <https://le.utah.gov/~2016/bills/static/HB0316.html>

<sup>10</sup> <https://deq.utah.gov/legacy/pollutants/p/particulate-matter/pm25/serious-area-state-implementation-plans/posted-inventories.htm>

<sup>11</sup> <https://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

The Director does not analyze California's Non-Road Rule. Instead, he mistakenly suggests that only California may adopt emission standards for non-road engines and vehicles stricter than the federal standards and fails to acknowledge that Utah may adopt California's standards:

Section 209(e) of the Clean Air Act (CAA) preempts states other than California from adopting or enforcing emissions standards for terrestrial and marine non-road engines or vehicles.... For this reason, the Utah Division of Air Quality (UDAQ) did not consider any SIP controls for non-road mobile sources beyond those already promulgated at the federal level.

Draft Serious SIP at 35. This is an incorrect interpretation of the law. While only California may adopt its own emission standards for non-road vehicles, the Clean Air Act authorizes Utah to adopt California standards. Clean Air Act 209(e)(2)(b), 42 U.S. Code § 7543(e)(2)(b). Therefore, because Utah can adopt California standards, the Director's BACM analysis is not complete. To meet BACM requirements, the Director is obligated to assess the emission reductions to be achieved by California's program and determine the economic feasibility of the application of the Rule in Utah. Under the Clean Air Act, the Director may not ignore such a promising means of achieving reductions of PM<sub>2.5</sub>, NO<sub>x</sub> and VOCs in a serious nonattainment area.

**G. The Director Did Not Adequately Consider California's More Stringent Regulation of On-Road Mobile Sources.**

For the same reason his BACM fell short of the law relative to non-road mobile sources, the Director's on-road BACM review is incomplete. In 2012, CARB adopted the LEV III amendments to California's Low-Emission Vehicle (LEV) regulations. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles and have consistently been adopted into various California SIPs.<sup>12</sup>

The Clean Air Act allows California to seek a waiver of the preemption which prohibits states from enacting emission standards for new motor vehicles. Any other state can choose to adopt California's more stringent standards, Clean Air Act 177, 42 U.S. Code § 7507, and many have done so, incorporating these provisions into their SIPs. *E.g. Motor Vehicle Mfrs. Ass'n of U.S. Inc. v. Jorling*, 181 A.D.2d 83, 87 (1992).

Moreover, California is the largest zero-emission vehicle market in the country. Electric and plug-in hybrid vehicles made up 3.6 percent of the state's overall car sales in 2016, and rose to nearly 5 percent in 2017. Nine other states have adopted similar zero-emission vehicle sales requirements, based on the California program.

As with California's Non-Road Rule, the Director does not analyze California's On-Road Rule again wrongly implying that because "Section 209(a) of the Clean Air Act (CAA) preempts

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<sup>12</sup> <https://www.arb.ca.gov/msprog/onroad/onroad.htm>

states other than California from adopting or enforcing standards for on-highway vehicles,” Utah’s hands are tied. However, this ignores the fact that Utah can adopt California standards. By failing to acknowledge this possibility, the Director’s BACM analysis is not complete. To meet BACM requirements, the Director is obligated to assess the emission reductions achieved by California’s program and determine the economic feasibility of the application of the standards in Utah. Under the Clean Air Act, the Director may not ignore such a promising means of achieving reductions of PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub> and VOCs in a serious nonattainment area.

#### **H. The Director Can Do More to Address Emissions from Wood Burning.**

First, we incorporate and endorse UPA’s review of the Director’s BACM for wood burning and second the trade organization’s argument that the Director’s BACM analysis falls short of what the law requires. *See* UPA Comments on BACM for Residential Wood Combustion at 24-37. As UPA concludes based on thorough analysis, there are technologically and economically feasible measures adopted by other states or under consideration by other states that would be appropriate and effective in Utah. As a result, the Director is obligated to consider and to adopt these measures as BACM to reduce emissions from wood burning in the Salt Lake NAA. *Id.* at 37.

In addition, we note that while the state recently applied for and received \$13 million from EPA for Targeted Airshed Grants to address wood burning measures, which will help reduce emissions from wood combustion, we believe more can be done to educate the public on why burning wood is harmful to public health, especially during inversions. Fairbanks North Star Borough’s Moderate PM<sub>2.5</sub> SIP determined public education and outreach programs for wood combustion to be RACM (III.D.5.7-3 and III.D.5.7-12).<sup>13</sup> Accordingly, similar programs should have been implemented under Salt Lake’s Moderate PM<sub>2.5</sub> SIP, and such programs determined to be BACM for the Salt Lake NAA.

In 2015, Sacramento implemented a program evaluation of its “Spare the Air” campaign, and was able to estimate emissions reductions as a result of the campaign. A similar program evaluation could be applied to a wood burning curtailment public outreach program; or, more broadly, could be applied to voluntary and mandatory action days to better understand the efficacy of these efforts and how to improve them.<sup>14</sup> Monitoring of Utah’s public outreach campaigns would lead to better designed programs and more significant emission reductions that would constitute BACM.

Finally, it is unclear whether the current level at which mandatory burn bans are instituted, 25 µg/m<sup>3</sup>, is as strict as necessary to qualify as BACM. San Joaquin Air Quality Management

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<sup>13</sup> [http://dec.alaska.gov/air/anpms/comm/docs/fbxSIPpm2-5/III.D.5.07-Control\\_Strategies-Adopted\\_09.07.16.pdf](http://dec.alaska.gov/air/anpms/comm/docs/fbxSIPpm2-5/III.D.5.07-Control_Strategies-Adopted_09.07.16.pdf)

<sup>14</sup> <http://www.sparetheair.com/assets/SurveyPDF/Final%20Report%20-%20Final%20Detailed%20Summary%20of%20the%202015%20Spare%20The%20Air%20Evaluation.pdf>

District has set its burn ban limit at 20  $\mu\text{g}/\text{m}^3$  in its moderate PM<sub>2.5</sub> SIP (Rule 4901.5.6.), and is considering a stricter limit for its serious PM<sub>2.5</sub> SIP.<sup>15</sup>

**I. Because Utah has No Near Road PM<sub>2.5</sub> Monitor, the Director Cannot Establish Attainment.**

Pursuant to the Clean Air Act, Utah was required to have an operational PM<sub>2.5</sub> near-road monitor in the Salt Lake NAA by January 1, 2017. 78 Fed. Reg. 3086, 3241 (Jan. 15, 2013). This regulatory requirement was based on scientific evidence that PM<sub>2.5</sub> concentrations are higher near highways and that, as a result, low-income and minority populations are disproportionately exposed to high PM<sub>2.5</sub> concentrations and therefore bear a disproportionate risk of adverse health outcomes from PM<sub>2.5</sub>. 81 Fed. Reg. 58010, 58136 (August 24, 2016)

EPA has explained that monitoring data from the required PM<sub>2.5</sub> near road monitors are to be considered when determining if a nonattainment area is attaining a PM<sub>2.5</sub> NAAQS: “When complete data from near-road PM<sub>2.5</sub> ambient monitors become available, the data should be used by states and the EPA for all aspects of the NAAQS implementation process, from attainment planning to the determination of attainment.” 81 Fed. Reg. at 58138.

Importantly, had Utah followed the law, its near road PM<sub>2.5</sub> monitor would have had the requisite three years of data as of December 2019<sup>16</sup> – data which would necessarily be relevant to determining whether the Salt Lake NAA was actually attaining the PM<sub>2.5</sub> NAAQS and particularly whether low income and minority populations in the Salt Lake NAA were being adequately protected from PM<sub>2.5</sub> pollution. *See id.* However, Utah has failed its legal obligations and failed to install and operate a near road monitor. Without an operational monitor, Utah cannot show attainment as and cannot ensure communities near highways are protected from high levels of PM<sub>2.5</sub>.

Two consequences should result from Utah’s refusal to install a near-road PM<sub>2.5</sub>. First, the Air Quality Board should demand that Director install the required monitor. *See* Utah Code 19-2-104(3)(b)(iii) (the Air Quality Board “shall...meet the requirements of federal air pollution laws[.]”) Second, the possible determination that the Salt Lake NAA has attained the PM<sub>2.5</sub> standard must be suspended until Utah can show that the standard is being met at a near road monitor.

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<sup>15</sup> <http://www.valleyair.org/rules/currnrules/r4901.pdf>

<sup>16</sup> Whether or not the Salt Lake NAA has attained the 24-hour PM<sub>2.5</sub> NAAQS will be determined in early 2020 based on data from 2017 to 2019. Therefore, three years of data from an operational near road monitor should have been available at the close of 2019 when this determination will be made.

**J. Based on its Modeling Analysis, The Director Should Consider Applying BACT to U.S. Magnesium.**

In his analysis of the CAMx model, used in conjunction with the Draft Serious SIP, the Director notes that “Both hydrochloric acid (HCl) and aerosol chloride play an important role in PM<sub>2.5</sub> formation.” Draft Serious SIP at 52. The Director then maintains that “[m]easured HCl is also underestimated by the model, particularly in the vicinity of US Magnesium, where values as high as 100 ppb were observed during the 2017 UWFPS.” *Id.* at 53. These findings establish that the Director must consider applying additional controls or undertaking better enforcement of HCl emissions at U.S. Magnesium.

This conclusion is echoed in UPA’s draft Contributions to Salt Lake City PM<sub>2.5</sub> from Ammonium Chloride and Evidence for US Magnesium Corporation as its Significant Source, which we cite and incorporate. That document “presents a weight-of-evidence analysis that clearly identifies ammonium chloride as a significant contributor to fine particulate (PM<sub>2.5</sub>) concentrations that exceed the National Ambient Air Quality Standard (NAAQS) in the Salt Lake City Serious Nonattainment Area, and indicates that US Magnesium Corporation is the single culpable source.” This finding, coupled with the Director’s own findings indicates that the Director is compelled to address U.S. Magnesium emissions and reduce their impact on the Salt Lake NAA.

More specifically, the Director should consider imposing BACT or other emission limits on the source. Under the Clean Air Act, “[a] state has discretion to require reductions from any source inside or outside of a PM<sub>2.5</sub> nonattainment area (but within the state’s boundaries) in order to fulfill its obligation to demonstrate attainment in a PM<sub>2.5</sub> nonattainment area as expeditiously as practicable[.]” 81 Fed. Reg. at 58080. Indeed, if it is necessary to secure emission reductions from U.S. Magnesium in order to show expedited attainment, the Director is required to mandate emission reductions from sources outside the Salt Lake NAA, such as U.S. Magnesium. *Id.* (“A state may need to require emissions reductions on sources located outside of a PM<sub>2.5</sub> nonattainment area if such reductions are needed in order to provide for expeditious attainment of the PM<sub>2.5</sub> NAAQS.”). Because further controls on US Magnesium will reduce ammonium chloride and PM<sub>2.5</sub> in Salt Lake City and could be a key to attaining the PM<sub>2.5</sub> NAAQS, the Air Quality Board should ask the Director to consider and implement effective and appropriate measures to reduce US Magnesium emissions and better enforcement of existing controls.

**IV. Conclusion**

Thank you again for the opportunity to comment on the Draft Serious SIP. We hope that you will carefully consider these comments and ultimately request that the Division undertake the analysis necessary to consider fully and implement additional measures to reduce emissions of PM<sub>2.5</sub> and PM<sub>2.5</sub> precursors in the Salt Lake NAA. As Utah’s economy and population continue to grow, it is more important than ever to ensure that our state regulations will be able to adequately control emissions and protect public health and the environment. We believe that

implementing the suggested measures above will help to achieve and maintain attainment, and allow for the economic expansion predicted in the future.

If the Air Quality Board decides to approve the Draft Serious SIP in its present form, it can still request that the Division, with stakeholder participation, analyze and consider the measures outlined here. Once the Division reports back with adequate BACM analysis of these control strategies, the Air Quality Board can consider, with the benefit of adequate information, adopting further measures to secure emission reductions in the Salt Lake NAA.



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Western Resource Advocates  
Attorney for HEAL, Sierra Club  
Utah Physicians and WRA

## **Attachment “A”**



October 16, 2017

U.S. Environmental Protection Agency  
Crystal Ostigaard  
Air Program, Region 8  
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Denver, Colorado 80202-1129  
[ostigaard.crystal@epa.gov](mailto:ostigaard.crystal@epa.gov)

submitted via: [www.regulations.gov](http://www.regulations.gov)

Re: Docket Number **EPA-R08-OAR-2017-0469-0001**: Air Quality State Implementation Plans; Approvals and Promulgations: State of Utah; Revisions to Utah Division of Administrative Rules, R307-300 Series; Area Source Rule for Attainment of Fine Particulate Matter Standards

Dear EPA, Region 8 and Ms. Ostigaard,

Thank you for the opportunity to comment on the Rule 307-309 series and specifically the Rule entitled Nonattainment and Maintenance Areas for PM<sub>10</sub> and PM<sub>2.5</sub>: Fugitive Emissions and Fugitive Dust (Rule 309). I make these comments on behalf of HEAL Utah, Utah Physicians for a Healthy Environment, and WESTERN RESOURCE ADVOCATES.

Our members and staff and members of the public – particularly those living near long-term sources of fugitive emissions such as ATK, the gravel pits, Bingham Mine, the refineries and Kennecott's tailings pile – are very concerned about the adverse health impacts of fugitive emissions and believe that the proposed Rule 307-309 is not adequate to control dust clouds and emissions being emitted from these and other sites. These concerns are warranted. There is significant evidence that: 1) fugitive emissions and substantial fugitive dust regularly emanate from sources; 2) that citizen complaints about these emissions are not resolved; and 3) that the Utah Division of Air Quality (DAQ) cannot and does not enforce Rule 307-309 in any meaningful sense.

We begin by underscoring the harms caused by exposure to particulate matter. These harms have been well-documented and have served as the basis for, *inter alia*, the 24-hour PM<sub>2.5</sub> NAAQS.

### Health Impacts of Fugitive Dust

PM<sub>2.5</sub> is a significant threat to public health. A recent study published in the *New England Journal of Medicine* concluded that even at levels lower than the NAAQS, there is “significant evidence of adverse effects” from exposure to PM<sub>2.5</sub> and ozone pollution:

Arizona  
P.O. Box 64128  
Tucson, AZ 85728

Colorado  
2260 Baseline Rd.  
Suite 200  
Boulder, CO 80302

Nevada  
550 W. Musser Street  
Suite 1  
Carson City, NV 89703

New Mexico  
409 East Palace Ave.  
Unit 2  
Santa Fe, NM 87501

Utah  
150 South 600 East  
Suite 2AB  
Salt Lake City, UT 84102

Increases of 10 µg per cubic meter in PM<sub>2.5</sub> and of 10 ppb in ozone were associated with increases in all-cause mortality of 7.3%...respectively. When the analysis was restricted to person-years with exposure to PM<sub>2.5</sub> of less than 12 µg per cubic meter and ozone of less than 50 ppb, the same increases in PM<sub>2.5</sub> and ozone were associated with increases in the risk of death of 13.6%...and 1.0%... respectively. For PM<sub>2.5</sub>, the risk of death among men, blacks, and people with Medicaid eligibility was higher than that in the rest of the population.<sup>1</sup>

Further, research shows that air borne heavy metals associated with urban centers and mining and other ground disturbing activities are especially detrimental to public health. According to EPA:

Exposure to metals in the air is capable of causing a myriad of human health effects, ranging from cardiovascular and pulmonary inflammation to cancer and damage of vital organs (Utsunomiya 2004). Contemporary research into air pollution is revealing that the metals components of particulate matter (PM) are contributing significantly to adverse health effects, even at the low levels found in ambient air (Pope *et al.* 1995). The EPA set health-based standards for fine particulates in 1997, but the standards do not take into account new research on the composition of the particulate matter or the toxicity of its components (Konkel 2009). The toxicity of particulate matter, in particular the fine and ultrafine particles (those particles smaller than 2.5 µm), has been proven to cause severe mortality and morbidity in humans over the past 25 years; however, in the past decade, emerging research is providing evidence that the metallic particles may be more dangerous than other PM components (Konkel 2009).<sup>2</sup>

Finally, in addition to PM<sub>2.5</sub> generally, crystalline silica is also detrimental to human health. The Occupational Safety and Health Administration estimates that “[a]bout 2.3 million workers are exposed to respirable crystalline silica in their workplaces.”<sup>3</sup> According to the *Report on Carcinogens, Fourteenth Edition*:

[r]espirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen* based on sufficient evidence of carcinogenicity from studies in humans...Exposure of workers to respirable crystalline silica is associated with elevated rates of lung cancer. The link between human lung cancer and exposure to respirable crystalline silica was strongest in studies of quarry and

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<sup>1</sup> N Engl J Med 2017; 376:2513-2522.

<sup>2</sup> *Draft Appendix C: Overview of Airborne Metals Regulations, Exposure Limits, Health Effects and Contemporary Research* (EPA, December 3, 2010) at ii, found at <https://www3.epa.gov/ttnemc01/prelim/otm31appC.pdf>.

<sup>3</sup> United States Department of Labor, *OSHA's Final Rule to Protect Workers from Exposure to Respirable Crystalline Silica*, <https://www.osha.gov/silica/>

granite workers and workers involved in ceramic, pottery, refractory brick, and diatomaceous earth industries.<sup>4</sup>

Importantly, “[m]ining and rock crushing are among the largest and most well-known sources of crystalline silica.”<sup>5</sup> “Sand and gravel pits and small mining operations are also sources of silica emissions into the ambient air.” *Id.* For example, EPA reported:

Schipper et al. (1993) compared the quartz concentrations from three Central Valley and two coastal sand and gravel operations in California. In the Central Valley, the silica percentage of PM<sub>10</sub> air emissions in the quarry pits ranged from 6.0% in Sacramento to 9.1% in Tracy, whereas the silica levels around the crusher ranged from 11.2% in Visalia to 25.5% in Tracy. In the coastal quarries in Monterey and Felton, the portions of quartz were from 14.1 to 16.6% in the PM<sub>10</sub> samples (Schipper et al., 1993).

*Id.* at 13; *see also id.* at 15. “Researchers around the world have identified that some non-occupational exposures to crystalline silica can result in lung diseases in people and animals.” *Id.* at 16. Even tiny concentrations of silica can be harmful to public health. California, New Jersey and Minnesota have established 3 µg/m<sup>3</sup> as an exposure limit for crystalline silica in air, while Texas, Vermont and New York have even lower standards.<sup>6</sup>

According to the Utah Department of Health, Utah has a higher prevalence of asthma in certain urban and rural health districts when compared to the overall asthma prevalence in the state. Since 2001, asthma prevalence has been on an upward trend in Utah. In Utah, 9 percent or 1 in 11 adults has asthma, while 7 percent of Utah’s children have severe problems breathing. Three geographic areas reported current asthma prevalence that is significantly higher compared to the state: Carbon/Emery Counties, Magna, and West Valley.<sup>7</sup>

#### **Several Sources Emit Significant Fugitive PM<sub>10</sub> and PM<sub>2.5</sub> in the Salt Lake and Provo NAAs.**

Permits issued to significant sources of fugitive dust establish that a substantial proportion of that dust is PM<sub>10</sub> and PM<sub>2.5</sub>. For example, while the approval order (AO) issued to the Geneva Rock Products (Geneva) Hansen-Lehi Plant (Point of the Mountain Facility) fails to estimate the tons per year of PM<sub>2.5</sub> that the gravel pit emits, the AO does state that the gravel pit emits 126 tons per year of fugitive PM<sub>10</sub> emissions. Exhibit “A” attached. EPA has determined that PM<sub>10</sub> is a criteria pollutant based on scientific studies confirming that particulate matter of this size does present a health hazard. The AO issued for the Staker & Parsons (Staker Parsons) Point of the

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<sup>4</sup> United States Department of Health and Human Services National Toxicology Program, *Report on Carcinogens, Fourteenth Edition: Silica, Crystalline (Respirable Size)*, found at <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/silica.pdf>.

<sup>5</sup> Wisconsin Department of Natural Resources, *Report to the Natural Resources Board: Silica Study* at 5 (August 2011), found at <http://dnr.wi.gov/files/pdf/pubs/am/am407.pdf>.

<sup>6</sup> <http://www.ewg.org/research/sandstorm/health-concerns-silica-outdoor-air> (see citations therein).

<sup>7</sup> <http://health.utah.gov/asthma/data/reports/burdenreport/Prevalence.pdf>

Mountain Facility calculated that operations there emit 69 tons per year of fugitive PM<sub>10</sub> emissions and 38 tons per year of PM<sub>2.5</sub> (although the AO does not specify whether these emissions represent fugitive or total emissions). Exhibit "B" attached. PM<sub>2.5</sub> is also a criteria pollutant and, according to EPA, presents a threat to human health in lower concentrations than PM<sub>10</sub>.

DAQ estimates that the Kennecott Copper Power Plant, Lab and Tailings Impoundment together emit 248 tons of PM<sub>10</sub> each year of which 248 tons is PM<sub>2.5</sub>. The agency does not indicate what percentage of these emissions are fugitive emissions, but absent clarifying information it can be assumed that most of these emissions are fugitive dust. Exhibit "C" attached. The Kennecott Copper Mine and Concentrator emit 1,519 tons of PM<sub>10</sub> of which 369 tons are PM<sub>2.5</sub>. The agency does not indicate what percentage of these emissions are fugitive emissions, but absent clarifying information it can be assumed that most of these emissions are fugitive dust. Exhibit "D" attached.

ATK emits 187 tons per year of PM<sub>10</sub>,<sup>8</sup> the Harper-Kilgore West Valley Pit emits 41 tons per year of PM<sub>10</sub>,<sup>9</sup> the Harper-Kilgore Valley Pit at Point of the Mountain, Bluffdale, emits 93 tons per year of PM<sub>10</sub> and 20 tons per year of PM<sub>2.5</sub>,<sup>10</sup> the Staker Parsons Beck Street facility emits 80 tons per year of fugitive PM<sub>10</sub> emissions,<sup>11</sup> and the Staker Parsons West Mountain facility emits 76 tons per year of PM<sub>10</sub>.<sup>12</sup> This is by no means an exhaustive list of large sources of fugitive dust and fugitive emissions in the Salt Lake and Provo PM<sub>2.5</sub> nonattainment areas. This list demonstrates that fugitive emissions in these valleys are not well controlled and that there is significant room for improvement. Moreover, these emissions represent the foundation for an appropriate RACT/RACM determination.

Thus, the benefits to public health from regulating fugitive emissions and fugitive dust to the full extent of the law are sizable. Fugitive dust emissions from mining and crushing operations in and around Salt Lake City – including those that occur during wind events – constitute a substantial threat to public health. A significant portion of these emissions are PM<sub>2.5</sub> and PM<sub>10</sub>, contain heavy metals (by virtue of the urban environment and local hard rock mining activities)

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[http://168.178.3.241:8080/DAQ\\_NOI/DocViewer?IntDocID=99560&contentType=application/pdf](http://168.178.3.241:8080/DAQ_NOI/DocViewer?IntDocID=99560&contentType=application/pdf)

9

[http://168.178.3.241:8080/DAQ\\_NOI/DocViewer?IntDocID=41864&contentType=application/pdf](http://168.178.3.241:8080/DAQ_NOI/DocViewer?IntDocID=41864&contentType=application/pdf)

10

[http://168.178.3.241:8080/DAQ\\_NOI/DocViewer?IntDocID=102844&contentType=application/pdf](http://168.178.3.241:8080/DAQ_NOI/DocViewer?IntDocID=102844&contentType=application/pdf)

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[http://168.178.3.241:8080/DAQ\\_NOI/DocViewer?IntDocID=36414&contentType=application/pdf](http://168.178.3.241:8080/DAQ_NOI/DocViewer?IntDocID=36414&contentType=application/pdf)

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[http://168.178.3.241:8080/DAQ\\_NOI/DocViewer?IntDocID=39309&contentType=application/pdf](http://168.178.3.241:8080/DAQ_NOI/DocViewer?IntDocID=39309&contentType=application/pdf)

and silica. This means that the Division should consider its regulation of fugitive emissions and fugitive dust to be as important, if not more important to protecting public health, as its regulation of point source emissions.

### **Legal Requirements**

Although EPA recently reclassified the Salt Lake City and Provo nonattainment areas as “Serious,” 82 Fed. Reg. 21711, 21712 (May 10, 2017); 42 U.S.C. § 7513(b)(2)(A), the agency is analyzing the proposed Rule 307-309 as part of Utah’s “Moderate” SIP. 82 Fed. Reg. 43205, 43206 (September 14, 2017). As such, EPA will assess whether the proposed rule constitutes RACT/RACM. *Id.* As EPA states in its PM<sub>2.5</sub> Implementation Rule, RACT is defined as

the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. Like RACT, the EPA has historically considered RACM to consist of control measures that are reasonably available, considering technological and economic infeasibility.

*Id.* (citations omitted). Thus, Rule 307-309 must be sufficiently rigorous to qualify as a “reasonably available control measure.” 42 U.S.C. § 7502(c)(1).

RACT/RACM must be enforceable. As part of RACT and RACM, the nonattainment PM<sub>2.5</sub> SIP must “include enforceable emission limitations, and such other control measures, means or techniques . . . as may be necessary or appropriate to provide for attainment.” 42 U.S.C. § 7502(c)(6). All control measures must be “quantifiable, enforceable, replicable and accountable.” 81 Fed. Reg. 58010, 58046 (Aug. 24, 2016); *see also id.* at 58069 (in order for an area to be redesignated as attainment “improvement in air quality [must be] due to permanent and enforceable reductions in emissions”).

An enforceable PM<sub>2.5</sub> SIP measure must include recordkeeping and reporting requirements sufficient to allow a determination that the source is complying with an emission limit on a “continuous basis:”

An enforceable regulation would . . . definitively state the recordkeeping and monitoring requirements appropriate to the type of sources being regulated. The recordkeeping and monitoring requirements would have to be sufficient to enable the state or the EPA to determine whether the source is complying with the emission limit on a continuous basis. An enforceable regulation would also contain test procedures in order to determine whether sources are in compliance.

81 Fed. Reg. at 58133. “[C]omplete and effective regulations that ensure compliance with an applicable emissions limit must include requirements for both performance testing of emissions and ongoing monitoring of the compliance performance of control measures” *Id.*

RACT/RACM must provide for enforcement by, inter alia, the public. In its PM<sub>2.5</sub> Implementation Rule

EPA clarifies that an enforceable regulation for a CAA program must be enforceable by the EPA, the state, and citizens. By taking action to approve emissions limitations and related provisions into the SIP, the EPA thereby makes those emission limitations a federally enforceable component of the SIP that the state, the EPA, and citizens can enforce thereafter in the event of a violation.

81 Fed. Reg. at 58047. "SIP provisions that effectively preclude enforcement of violations by the EPA or citizens, whether through impermissible exemptions or other SIP provisions that function to bar effective enforcement, are not acceptable." 81 Fed. Reg. at 58047; *see also* 58129 ("Once approved into a SIP, such a measure becomes an enforceable emission standard or limitation subject to EPA or citizen enforcement under CAA section 304, which cannot be altered except through a SIP revision approved by the EPA.")

Enforceable PM<sub>2.5</sub> SIP measures must also include recordkeeping and reporting requirements that in turn, provide for the "periodic electronic reporting of information as needed to the compliance office." *Id.* at 58133. Finally, EPA acknowledges that these compliance reports must be made available to the public:

The EPA also recommends that compliance reports be made available online so that the general public can readily access the information without the need to submit Freedom of Information Act (FOIA) requests to the EPA.

*Id.* at 58133.

### **Rule 307-309 is Not RACM/RACT**

Initially, the record does not support the contention that Rule 307-309 is RACT/RACM. EPA states that DAQ "reviewed other western state programs (including South Coast & San Joaquin Valley, California; Washoe & Clark Counties, Nevada; and Maricopa, Arizona) for the RACM analysis on R307-309." 82 Fed. Reg. at 43207. EPA does not indicate where in the record this analysis occurred, but appears to be in the document entitled "Area Source Control Strategies" at 5.b.i - 30-31.

DAQ's RACT/RACM analysis lacks any analysis of technological and economic feasibility of available controls and measures, including those adopted by California, Nevada and Arizona. The PM<sub>2.5</sub> Implementation rule states that to determine RACT/RACM, the state must "determine[] if any of the identified potential control measures are not technologically feasible and whether any of the identified technologically feasible control measures are not economically feasible." 81 Fed. Reg. at 58035. "Economic feasibility of RACM and RACT is thus largely informed by evidence that other similar sources have implemented the control technology, process change or measure in question." 81 Fed. Reg. at 58042.

For each technologically feasible control measure, a state should evaluate the economic feasibility of the measure or control, through consideration of factors such as the capital costs, operating and maintenance costs, and cost effectiveness (i.e., cost per ton of

pollutant reduced by that measure or technology) associated with such measure or control. A state should not reject a technologically feasible control measure or technology as being economically infeasible if such a measure or technology has been implemented at other similar sources (i.e., at sources that would be included in the same source category in the emissions inventory data collection process), unless the state provides an adequate justification that clearly explains the specific circumstances of the source or sources in the nonattainment area that make such a measure or technology economically infeasible for sources in the nonattainment area.

*Id.* DAQ has not met these obligations. The State does **not** suggest or provide evidence to indicate that the lower opacity limit or monitoring requirements that have been adopted by other states and incorporated into their regulatory schemes for decades are technologically infeasible. The State does **not** assess whether these technologically available limits are economically infeasible. DAQ offers no evidence of emission reductions achieved or costs borne by sources in these other states. DAQ does not provide evidence or analysis of the emission reductions achieved or costs borne by sources in Utah should these measures be adopted here. Therefore, the record does not support DAQ's RACT/RACM assessment and the public is prevented from making meaningful comments on the basis for and results of the DAQ's RACT/RACM review.

DAQ states that "South Coast, Washoe, Clark and Maricopa Counties have stringent opacity requirements ranging from no visible dust at property boundary, no visible dust any time, to limiting visible dust to five minutes within an hour. Impetus: serious nonattainment."<sup>13</sup> DAQ also states "Washoe, Clark and Maricopa Counties have more stringent high wind requirements. Generally speaking, they include the option to cease operations or institute contingency measures. Impetus: serious nonattainment."<sup>14</sup> DAQ implies that simply because a measure was adopted in the context of serious nonattainment that it could not also be RACT/RACM. There is no basis in the record for this apparent assumption. Rather, DAQ must determine whether or not a measure or control is reasonably available considering technological and economic feasibility. This DAQ did not do and so its RACT/RACM analysis is legally inadequate.

Technologically and economically feasible dust control limitations – particularly for large operations<sup>15</sup> – DAQ did not analyze include:

- Prohibiting visible dust emissions beyond property line<sup>16</sup>
- Limiting an upwind/downwind PM<sub>10</sub> differential to 50 µg/m<sup>3</sup><sup>17</sup>

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<sup>13</sup> Area Source Control Strategies at 5.b.i - 30.

<sup>14</sup> *Id.*

<sup>15</sup> Large operations could mean "any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic meters (5,000 cubic yards) or more three times during the most recent 365-day period." SCAQMD Rule 403(c)(21).

<sup>16</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf> (SCAQMD Rule 403(d) & Table 2)

<sup>17</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf>. DAQ takes issue with this provision, claiming we have not shown that it is feasible. The fact that it has been a rule

- Limiting visible dust emissions to 100 feet from origin<sup>18</sup>

Importantly, rather than assuming that the same measures must apply to all fugitive dust sources of more than .25 acre, DAQ must consider a rule that imposes more stringent emission limits, monitoring, recordkeeping and reporting on sources that emit significant fugitive dust, such as the sources catalogued above. This is the economically and technologically feasible approach adopted by South Coast in its fugitive dust rule, which has additional requirements for “large operations.”<sup>19</sup> Thus, when it undertakes adequate RACT/RACM analysis, DAQ should consider a tiered approach to control fugitive dust.

The significant sources of fugitive emissions in the Salt Lake and Provo NAAs, such as those listed above, have huge areas of disturbed, but inactive and largely uncontrolled lands on their properties. RACT/RACM for these sites includes:

- Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust; or,
- Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; or,
- Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; or
- Utilize any combination of control actions above such that, in total, these actions apply to all inactive disturbed surface areas.<sup>20</sup>

RACT/RACM should include a provision that at any source, disturbed land should be minimized and immediate reclamation of all disturbed lands sufficient to eliminate emissions should be the preferred dust control measure.

Other RACT/RACM practices for large operations include:

For earthmoving (except construction cutting and filling areas, and mining operations):

- Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations.

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in California at least since 2005 establishes that the rule is both economically and technologically feasible.

<sup>18</sup> *Id.*; see also [http://ulpeis.anl.gov/documents/dpeis/references/pdfs/Countess\\_Environmental\\_2006\\_WRAP\\_Fugitive.pdf](http://ulpeis.anl.gov/documents/dpeis/references/pdfs/Countess_Environmental_2006_WRAP_Fugitive.pdf) (WRAP Handbook at 3-19 & 9-10)

<sup>19</sup> SCAQMD Rule 403(c)(21); 403 & Table 2.

<sup>20</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf> (SCAQMD Rule 403 & Table 2); see also, 403(c).

- For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.<sup>21</sup>

For earth-moving (construction fill areas):

- Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216. For areas which have an optimum moisture content for compaction of less than 12 percent, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.<sup>22</sup>

For earth-moving (construction cut areas and mining operations):

- Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors. Disturbed surface areas (except completed grading areas).
- Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.<sup>23</sup>

For disturbed surface areas (completed grading areas)

- Apply chemical stabilizers within five working days of grading completion; or,
- Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; or,
- Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter.<sup>24</sup>

For unpaved Roads

- Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; or,

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<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

- Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; or
- Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.<sup>25</sup>

For open storage piles:

- Apply chemical stabilizers; or,
- Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; or,
- Install temporary coverings; or,
- Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.<sup>26</sup>

DAQ acknowledges that other states have rigorous requirements or contingency measures that apply under windy and other adverse conditions, but does not analyze the economic or technological feasibility of these measures.<sup>27</sup> As a result, the purported RACT/RACM analysis and determination is without basis in the record. Economically and technologically feasible contingency measures – measures to employ when those listed above do not achieve relevant emission limitations – DAQ should consider in an adequate RACT/RACM analysis include:

For earth-moving:

- Cease all active operations; or,
- Apply water to soil not more than 15 minutes prior to moving such soil.

For disturbed surface areas

- On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; or,
- Apply chemical stabilizers prior to wind event; or,
- Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; or

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<sup>25</sup> *Id.* Rule 403(e) states: “Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified [as contingency measures] of this Rule when the applicable performance standards cannot be met through use of Table 2 actions.”

<sup>26</sup> *Id.*

<sup>27</sup> Area Source Control Strategies at 5.b.i - 30.

- Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; or,
- Utilize any combination of control actions:
  - Apply chemical stabilizers prior to wind event; or,
  - Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; or,
  - Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter such that, in total, these actions apply to all disturbed surface areas.<sup>28</sup>

For unpaved roads:

- Apply chemical stabilizers prior to wind event; or,
- Apply water twice per hour during active operation; or
- Stop all vehicular traffic.<sup>29</sup>

For open storage piles:

- Apply water twice per hour; or,
- Install temporary coverings.<sup>30</sup>

In its response to 2017 comments on Rule 307-309, DAQ states “EPA has already indicated that the previous RACM analyses have shown that the rule meets RACM, and the only additional requirements for approval are the few changes being proposed. Therefore, an additional RACM analysis to support approval into the Moderate Area SIPs is not necessary.” Undated Memo to Utah Air Quality Board at unnumbered 4; *see id.* at 2 (“The proposed rule was amended at the request of EPA to satisfy RACM and enable EPA to approve the rule into the Moderate Area PM SIPs.”).

Initially, we note that this statement improperly suggests that EPA has already determined that Rule 307-309 is RACT/RACM and a valid SIP provision. This, of course, would be highly improper, as this is the first opportunity that the public has had to comment on EPA’s proposed action on the rule and therefore on EPA’s evaluation of whether the rule is RACT/RACM and a valid SIP element. EPA may not have already made up its mind as to the adequacy of Rule 307-309 and the record that purports to support it.

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<sup>28</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf> (SCAQMD Rule 403(e) & Table 3); *see also*, 403(c).

<sup>29</sup> *Id.*

<sup>30</sup> <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf> (SCAQMD Rule 403(e) & Table 3); *see also*, 403(c)

Second, we note that DAQ did not clarify that it was basing its assessment of the rule on “previous RACM analyses” and therefore that we were prevented from addressing the specifics of these analyses. As we stated in our 2017 comments to the state: “Rule 309 is problematic because it is not accompanied by any evaluation addressing the requirements of BACM or RACM and so is not supported by the record. Without such analysis, the public cannot comment on the proposed rule in a meaningful manner.”<sup>31</sup>

**Rule 307-309 Does Not Require Adequate Monitoring, Recordkeeping and Reporting and Is Not Enforceable.**

Rule 307-309 fails to include any provision specifying how frequently monitoring of the opacity emission limit must occur and so violates the monitoring and enforceability requirements of an adequate SIP measure.

Rule 307-309 does not require the source to monitor compliance with the opacity limitation. In addition, record evidence shows that DAQ does not expect sources to monitor compliance with the opacity limitation. This means that the rule fails to ensure continuous compliance with the rule’s emission limits. Under the rule, monitoring might never occur. As a result, the rule does not constitute a valid SIP provision.

Rule 307-309 includes no reporting requirement. As a result, the rule does not constitute a valid SIP provision.

For these reasons – Rule 307-309 lacks adequate monitoring and has no reporting requirements – the rule is unenforceable. Record evidence further underscores that both on its face and as a practical matter, Rule 307-309 is unenforceable.

DAQ claims that it has more than 1500 sites<sup>32</sup> that emit fugitive dust.<sup>33</sup> The agency also states that between “from 2009 to 2012” DAQ inspected a “total of 2,126” sites that constitute sources of fugitive emissions. 82 Fed. Reg. at 43207. This means that DAQ averages 2 inspections per work day and that it would take 2.9 years for the agency to inspect every relevant site at least once.<sup>34</sup> Thus, by relying only on inspections to enforce the opacity limits, Rule 307-309 cannot ensure continuous compliance. Rather, the record evidence indicates that the rule can ensure compliance for some brief period of time – during an inspection – at best once every three years.

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<sup>31</sup> July 3, 2017 Rule 309 Comments at 6, Exhibit “E” attached.

<sup>32</sup> In its Area Source Control Strategies at 5.b.i – 8, DAQ states “nearly every one of the over 4,000 active permits contains a fugitive dust control requirement.”

<sup>33</sup> Citizen Complaints, Exhibit “F” attached. DAQ Staff state in an email “We have had boots on the ground and eyes on this place more than any other of our 1500 + permitted sites since it began operation about a year ago as a result of the complaints we have received.”

<sup>34</sup> Total of 2126 visits divided by 1040 workdays in four years (260 workdays x 4) is 2 visits per workday. To visit 1500 sites at the rate of 2 visits per workday would take 2.6 years (at 260 workdays per year).

More specifically, evidence shows that in the last several years, at most, DAQ has inspected Geneva and Staker Parsons once every year. As DAQ acknowledges, this monitoring shows only whether the source was in compliance with the opacity limit at the time the reading was made and in no way establishes that the source is in continuous compliance.<sup>35</sup> For example, in the 2016 inspection report for Geneva, DAQ states in response to the provision “the owner/operator shall not allow visible emissions from any stationary source on site to exceed 20 percent opacity” that Geneva is “[i]n compliance” because “[n]o visible emissions **during this inspection** exceeded the 20% opacity limit.”<sup>36</sup> Importantly, DAQ does not rely on or mention any opacity monitoring other than the monitoring that occurred that day, indicating that DAQ does not review any Geneva monitoring of opacity and suggests that no such monitoring is required.

Similarly, the annual inspection reports only purport to determine whether or not Geneva and Staker Parsons are complying with the dust suppression actions – watering and similar activities – on the particular day the inspection was made. There is no evidence that DAQ reviewed water records for days other than the day of the inspection or made any assessment regarding compliance on other days.

Relative to its enforcement of Rule 307-309, DAQ states that “[t]here were only eight violations from 2009 to 2012 out of 2,126 inspections.”<sup>37</sup> Based on this, the agency claims “[c]ompliance history for this rule exceeds 99%.”<sup>38</sup> These inspections were of major and minor sources and miscellaneous sites and therefore not inspections aimed at determining compliance with fugitive dust and fugitive emission rules specifically.<sup>39</sup> The agency gives no indication of the conditions under which it inspected these sites and if and how DAQ attempted to make inspections when it is breezy or windy. Three of the Geneva and Staker Parsons inspection reports fail to mention wind speed, while the third classifies wind speed as 0-10 miles per hour.<sup>40</sup> This underscores that DAQ does not ensure compliance with Rule 307-309 during a full range of weather conditions or other operating circumstances.

DAQ admits that “R307-309 was amended in 2012 to add the PM<sub>2.5</sub> counties and an entire new framework was created based on historical comments we have received from EPA on dust issues (both SIP and exceptional events).”<sup>41</sup> At the same time, the agency only discusses compliance and inspections for 2009-2012. Thus, the record is devoid of any analysis of compliance with or enforcement of the proposed rule.

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<sup>35</sup> See Exhibits J-K (annual 2016 and 2015 inspections of Geneva and Staker Parsons).

<sup>36</sup> July 7, 2016 Full Compliance Report, Geneva, Exhibit “H” at 6

<sup>37</sup> Area Source Control Strategies at 5.b.i – 32.

<sup>38</sup> *Id.*

<sup>39</sup> Area Source Control Strategies at 5.b.i – 4.

<sup>40</sup> See Exhibits J-K (annual 2016 and 2015 inspections of Geneva and Staker Parsons).

<sup>41</sup> Area Source Control Strategies at 5.b.i – 8.

## **DAQ's Unsubstantiated Claims that Citizen Complaints have Decreased Are Misleading and Irrelevant.**

Without basis in the record, DAQ states "that the number of dust complaints has significantly decreased since 2008 and only a very small number of complaints were related to an exceedance of the PM<sub>2.5</sub> standard." 82 Fed. Reg. at 43207. This statement is without basis in the record.

Rather, evidence establishes that Utah residents routinely complain about fugitive dust. Moreover, residents report that they: 1) are unaware of how to lodge a complaint; 2) have ceased complaining because they see no results; and 3) stopped alerting DAQ of dust storms because they have been told nothing can be done.<sup>42</sup> Citizens also report being constantly exposed to fugitive emissions blowing from gravel pits and other mining operations.<sup>43</sup>

Other evidence of citizen complaints and pictures of fugitive dust can be found at

- The Facebook page "Stop Geneva Rock," which is replete with photos and stories evidencing the considerable dust storms that come off the Point of the Mountain gravel pits.<sup>44</sup>
- A video of testimony given to the Utah County Commission, during which farmers explain the adverse impacts of dust from gravel pits on their fruit crops.  
<https://youtu.be/p3IFfjmZ2nw><sup>45</sup>

## **Because the Public is Denied Access to Compliance Records, Rule 307-309 Is Not Enforceable by the Public and Therefore Is Not a Valid SIP Provision.**

Rule 309 relies on a scheme that allows sources to retain possession of records establishing compliance with the rule's emission limit and operating practice. As a result, the public is unlawfully prevented from securing access to the bulk of the records that purport to establish that the relevant sources are complying with the SIP. The Director has successfully maintained in Court that the public does not have access to compliance records retained by the source. Thus, Rule 307-309 is not enforceable by the public and otherwise violated the Clean Air Act.

As established above, to be legally defensible, SIP emission limitations and measures must be enforceable by the public. Without direct access to records kept to show compliance with SIP emission limitations and measures, the public is prevented from enforcing these provisions in a meaningful way. It is plain that the only way the public may enforce SIP emission limitations

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<sup>42</sup> A compilation of a faction of the complaints made to DAQ and fugitive dust sources are attached as Exhibit F.

<sup>43</sup> *Id.*

<sup>44</sup> <https://www.facebook.com/groups/stopgenevarock/>

<sup>45</sup> *See:* 37:00 (Intro to fruit farming); 42:30 (Intro to issue of gravel mining); 44:17 (Picture of dust from blasting); 45:25 (Impacts of dust on fruit crop); 51:33 (Testimony of resident/farmer re dust and complaints to and experience with DAQ); 54:30 (Testify that after one hour resident can write name in dust on windshield).

and operating practices is to be able to review the records maintained by the source that purport to show compliance with those limits and practices. Because – based on the Director’s own analysis – the current version of Rule 307-309 does not allow meaningful enforcement by the public, the proposed subsection is unlawful and should be rejected.

After all, “SIP provisions that effectively preclude enforcement of violations by the EPA or citizens, whether through impermissible exemptions or other SIP provisions that function to bar effective enforcement, are not acceptable.” 81 Fed. Reg. at 58047. “Once approved into a SIP, such a measure becomes an enforceable emission standard or limitation subject to EPA or citizen enforcement under CAA section 304, which cannot be altered except through a SIP revision approved by the EPA.” *Id.* at 58129. “[A]n enforceable regulation for a CAA program must be enforceable by the EPA, the state, and citizens. By taking action to approve emissions limitations and related provisions into the SIP, the EPA thereby makes those emission limitations a federally enforceable component of the SIP that the state, the EPA, and citizens can enforce thereafter in the event of a violation.” 81 Fed. Reg. at 58047

The importance of assuring that the public has immediate and direct access to compliance records has been made particularly evident. Residents nearby are concerned by the giant dust plumes that they see leaving the property of the gravel pits and believe that the gravel pits may not be complying with Rule 307-309. As with the proposed rule, Rule 307-309 then included the following provision:

All sources subject to R307-309-5(2) and (3) shall maintain records demonstrating compliance with R307-309. **These records shall be available to the director upon request.**

Utah Admin. Code R307-309-12 (emphasis added). Both the Point of the Mountain gravel pits - - Geneva and Staker Parsons – are subject to R307-309-5(2) and (3). When we were denied access to these R307-309-12 documents, both by the DAQ and the Director of DAQ, we appealed and the Third District Court upheld the Director. Because the denial of access has been upheld, it is incumbent on the Division to amend Rule 309 to require periodic compliance reports and to allow the public access to compliance documents.

It is important to note that the Rule 307-309 is a critical element of nonattainment and maintenance SIPs and so is subject to the same enforceability requirements set forth above. It is also significant that, based on our review of documents that are available to the public, neither Geneva or Staker Parsons has submitted “periodic” Rule 309 compliance reports to the Director as required by law. When inspections are so infrequent, compliance records take on added importance. Review of these records is the only means by which the public can determine if the companies are complying with Rule 309 on a continuous basis, as the law requires.

In sum then, the proposed Rule 307-309 relies on a recordkeeping scheme that allows sources to maintain compliance records. The public has no right to review these records directly. Therefore, the public is prevented from reviewing the very records the SIP relies on to show whether the source is complying with SIP emission limits and operating practices. As a result, the public is barred from enforcing these limits and practices and Rule 309 is unlawful.

DAQ cites the South Coast and Maricopa dust rules to suggest that it is permissible for the agency to include in a SIP a regulation that is not enforceable by the public. Undated Memo to Utah Air Quality Board at unnumbered 4-5. This approach is not compelling. DAQ does not attempt to explain whether California and Arizona have decided to deny the public access to compliance records based on the fact that sources maintain the compliance records. For example, it could be, and the record is silent on this matter, that these two states would request compliance records should the public ask for them. It could also be that in these states, open records laws require the states to request records should the public ask for them. Therefore, without additional analysis which the record does not contain, the South Coast and Maricopa dust rules do not establish that a SIP may include provisions that do not allow the public to access compliance records.

### **The Opacity Limit in Rule 307-309 is Inadequate and is Not RACT/RACM:**

As discussed in more detail below, Rule 309's reliance on opacity to limit fugitive dust and fugitive emissions is insufficient to meet the requirements of RACT/RACM and otherwise protect public health.

First, the Rule 307-309 fails to include any provision specifying how frequently monitoring of the opacity emission limit must occur and so violates the enforceability requirements of an adequate SIP measure. Our experience has been that DAQ monitors opacity at Geneva and Staker Parsons once every two years. As DAQ acknowledges, this monitoring shows only whether the source was in compliance with the limit at the time the reading was made and in no way establishes that the source is in continuous compliance.

More specifically:

- Opacity cannot be measured at night or when visibility is poor. Therefore, Rule 307-309 is not enforceable. Conditions that create fugitive emissions can and do occur at night and when visibility is impaired.
- Rule 307-309 does not specify if and how often opacity monitoring should occur and therefore is not enforceable. This is of particular importance because, for example, fugitive dust emissions rates are highly variable and periodic monitoring is insufficient to ensure continuous compliance with the opacity limits.
- Rule 307-309 does not require monitoring, recordkeeping or reporting of opacity emissions and therefore does not meet the requirements of RACT/RACM. R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice. Indeed, it is unclear what R307-309-12 does require.
- Any monitoring for opacity will necessarily fall well short of the continuous monitoring favored by the Clean Air Act.
- For the reasons stated above, the public is prevented from determining whether the opacity limits set forth in Rule 307-309 are being met and is therefore denied the opportunity to enforce the rule relative to any source.

## **Additional Comments on Specific Provisions of the Rule**

### **R307-309-4. Fugitive Emissions:**

- There are no monitoring (other than the method to use), recordkeeping or reporting requirements associated with fugitive emissions. Therefore, R307-309-4 does not meet the requirements for RACT/RACM. Without specifying monitoring frequency – particularly for sources that are **not** intermittent or mobile – R307-309-4 cannot ensure continuous compliance with the 15% opacity limit.
- R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice.
- R307-309-4 does not specify if and how often opacity monitoring should occur and therefore is not enforceable.
- By apparently relying on opacity to limit and monitor fugitive emissions, R307-309-4 fails to address non-visible fugitive emissions or to limit or require monitoring of fugitive emissions at night or when visibility is poor.
- R307-309-4 does not adopt RACT/RACM, such as requirements that sources regularly look for and stop any emission leaks or that they capture and control fugitive emissions, or demonstrate that such measures are not reasonable.

### **R307-309-5. General Requirements for Fugitive Dust:**

- There is no demonstration that the measures of R307-309-5 are RACT/RACM. In light of measures adopted elsewhere, including in Southern California, it is apparent that additional controls exist that are technologically and economically feasible, particularly for sources of significant, long-term fugitive emissions.
- There is no reason that all sources of fugitive dust should be subject to identical control measures. What is RACT/RACM for some sources may not be RACT/RACM for smaller, more temporary sources. Pursuant to his SIP obligations, the Director must consider more stringent emission limits for sources of more significant emissions.
- R307-309-5 is not enforceable and any emission reductions it achieves are not measurable because it lacks monitoring, recordkeeping and reporting requirements. R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice.
- Please see comments above regarding opacity.

### **R307-309-5(3). Wind Speed:**

R307-309-5(3) is particularly problematic, as the adverse health impacts of fugitive emissions are just as great when the wind blows as when it does not and because the concentrations of PM<sub>2.5</sub> during wind events can be dangerously high. Based on this concern, please consider the following:

- R307-309-5(3) requires a source to “administer” one or more of various contingency measures when the wind is stronger than 25 mph. These measures are not equally effective and it should not be left to the source to decide which measure to adopt, regardless of the size or type of source. For example, the rule would authorize a source of significant fugitive dust to undertake “pre-event” watering as sufficient to reduce emissions during a wind event, regardless of whether this is an effective measure. Wind events may last hours and days and therefore it is unreasonable to suggest that a one-time watering of, for example a gravel pit operation, is an adequate contingency measure. During an extended wind event – one that is longer than an hour for example – “pre-event watering” would excuse the source from undertaking hourly water. Yet, there is no reason to believe that watering less frequently than every hour would be sufficient to control fugitive dust emissions to any degree.
- The use of the word “watering” is vague and unenforceable and cannot be monitored. “Watering” in this context could mean anything from moistening or sprinkling to drenching. “Watering” should be defined.
- The use of the word “additional” is vague and unenforceable and cannot be monitored. “Additional” in this context could mean almost anything from hardly any additional stabilization to considerable additional stabilization. “Additional” should be defined.
- The use of the phrase “to the extent practicable” to describe the cessation or reduction of activities is vague and unenforceable and cannot be monitored. This phrase could mean almost anything and its application could result in no change in operations, should the source deem that it would not be practicable for it to cease or reduce its dust producing activities.
- R307-309-5(3)(d) is open ended, vague and subject to abuse in stating that the opacity limit shall not apply if the source continues to implement the dust control plan and the source has “cease[d] or reduce[d] fugitive dust producing operations.” This language suggests that any reduction in these operations, including a minor reduction, would qualify the source for an exemption from emission limits. Rather, the rule should require all dust producing operations to be stopped during a wind event. Moreover, in some instances, the mere cessation of dust producing activities will not guarantee that emissions will be adequately controlled. This is particularly true with ground disturbing activities.
- R307-309-5(5)(a) again underscores that Rule 309 fails to address nonvisible fugitive emissions, including those from vehicles.

**R307-309-6. Fugitive Dust Control Plan:**

- R307-309-6(1)(a) is particularly problematic. This provision seems to suggest that regardless of the content of the pre-2012 dust plan and regardless of whether it is in keeping with R307-309-6, it is BACM/RACM and is adequate to meet the requirements of Rule 309. This provision makes Rule 309 unenforceable and means that the rule does not reflect BACM/RACM and therefore does not meet Clean Air Act requirements for a Moderate SIP control measure.

- While fugitive dust plan forms may be appropriate for small sources of fugitive emissions, there is no reason to believe that such forms are adequate to ensure that all sources have implemented all BACM/RACM to control fugitive emissions.
- R307-309-6(4) is vague. Particularly, there is no criteria associated with the term “stabilize.” What “stabilize” means is apparently left to the source to determine. The rule should define “stabilize,” including as an outcome – in other words, describe what stabilize is to achieve. This is particularly true because “stabilize” is used in the context of a whole host of different activities. Similarly, the terms “limit” and “minimize” and the phrase “where possible” are vague and not enforceable.
- R307-309-6(4)(e)(iii) should be edited to include a verb, such as “use” or “implement.”
- R307-309-6 is not enforceable and fails to require monitoring, recordkeeping and reporting. R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice.

#### **R307-309-7 thru R307-309-9**

- The terms “promptly” and “clean” are vague and are not subject to enforcement.
- R307-309-7 and -8 should apply to unpaved roads as well.
- R307-309-9(1): the phrase “possessing the right to use” is vague. It is unclear whether this phrase would include use of any public road. This provision should also apply to persons using public unpaved roads.
- R307-309-9(2): this provision should also apply to persons using public unpaved roads.

#### **R307-309-10. Mining Activities:**

- It appears inconsistent that mining activities are not subject to dust control plans.
- R307-309-10(3) is vague and fails to require monitoring, recordkeeping or reporting and is not enforceable. R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice.
- R307-309-10(3) requires a source to “include” one or more of measures to control dust. The rule includes the confusing use of “or.” These measures are not equally effective and it should not be left to the source to decide which measure to adopt, regardless of the size or type of source. As written and given the use of the word “include,” it appears that the rule allows a mining operator to implement only one of the various measures described in (3)(a) to (3)(q).
- The terms and phrases “periodic,” “minimizing,” “reducing,” “restricting,” “prompt” and the “use of chemical stabilizers” are vague and are not enforceable.

#### **R307-309-11. Tailings Piles and Ponds:**

- It appears inconsistent that tailings piles and ponds are not subject to dust control plans.

- R307-309-11(2) is vague and fails to require monitoring, recordkeeping or reporting and is not enforceable. R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice.
- R307-309-11(2) requires a source to “include” one or more of measures to control dust. The rule includes the confusing use of “or.” These measures are not equally effective and it should not be left to the source to decide which measure to adopt. As written and given the use of the word “include,” it appears that the rule allows an operator to implement only one of the various measures described in (2)(a) to (2)(i).
- The terms and phrases used in R307-309-11(2) are vague and are not enforceable.

**R307-309-12. Recordkeeping.**

- R307-309-12 does require records demonstrating compliance with the rule generally. However, there are no specific monitoring requirements in the rule. Therefore, the rule does not require recordkeeping or reporting for any particular emission limit, control or practice.
- It is not clear what R307-309-12 does require. This provision is vague and therefore is not enforceable.
- R307-309-12 is unlawful because it fails to allow public access to compliance documents.

**Other Issues**

- The rule should clarify that it applies at all times, including during when operations may have ceased, such as after work, weekends and holidays, and specify that R307-309 applies and emissions must be controlled and monitored at all times.
- As they are an important component of the proposed maintenance plan, fugitive dust plans forms should be subject to public notice and comment.
- The control measures adopted for mining operations and tailings piles and ponds should be subject to public notice and comment, should reflect BACM/RACM, should be enforceable and should require monitoring, reporting and recordkeeping. These measures should include source-specific emission limitations that are enforceable and include sufficiently frequent monitoring to ensure continuous compliance.
- The rule should establish that a source must comply with mandated practices or plans until the source has formally notified the Director that all fugitive emissions and emission generating activities have permanently ceased.

Thank you for considering these comments. I would welcome the opportunity to discuss these comments with you.

A handwritten signature in black ink, consisting of a large, stylized 'J' followed by a cursive 'W' and a trailing flourish.

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JORO WALKER, Esq.

