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Opacity SIP justification . doc Fugitive Dust Issue.doc

The department requests approval of our current opacity regulations as part of the State Implementation Plan.

Opacity Background:

On October 1, 2004, the department changed its opacity standards in 18 AAC 50 .050(a) and 18 AAC 50.055(a)(1) - (3) from 3 minute aggregate to six minute average standards. The three minute aggregate standards were based on the number of individual readings over the opacity percent specified in each standard. EPA has asked the department whether this is a relaxation of our standard. The department made this change to prevent an unintended relaxation of the existing standard. Industry groups challenged the department's ability to enforce when opacity readings were less than or equal to the applicable standard plus 15%, based on limitations of the reference test method, Method 9. Method 9 certification requires the observer to maintain an error of measurement not to exceed 15% opacity for individual readings. As reported in Method 9, the tested positive observational error of certified readers is less than 7%2% for readings averaged over 6 minutes. The department did not want its standard to effectively increase to allow for a 15% error of measurement, which would be the case if we maintained the existing standards and which we had not previously considered. For the standard in 18 AAC 50.050(a) and 18 AAC 50.055(a)(1), accounting for the possible error of the method could be interpreted to raise the intended standard from readings not greater than 20% to readings not greater than 35%. While the department has not conceded that opacity readings less than 40% are insufficient to show non compliance with the 20% standard, it decided to avoid possible future complications in enforcement cases by changing the basis of the standard.

Opacity Justification:

While it is theoretically possible for the three minute aggregate standard to be more stringent under certain specific circumstances (even accounting for the increased inaccuracy of the test method), the department finds that this is unlikely and the new standard will be more stringent in the great majority of cases. The aggregate standard would be more conservative only when there is a plume that is both high in opacity and intermittent. That is, when the opacity goes to near zero much of the time but is high for short periods. In order for the department to be likely to pursue an enforcement case, this would have to be routinely true. Specifically, if we assume that Method 9 [rather than a COMS] is used to measure compliance, for the averaging method not to show a violation and the aggregate standard

to show a violation:

" During a single six minute averaging period, half of the individual readings would have to be between 40% and 45%, or greater, except during the time they were near zero, in order for the average to be greater than 20%. In that case it would take about an additional three readings at 40% or 45% to show a violation under the averaging standard."

For the 3 minute aggregate method, during a one hour period, most of the readings would have to be low, with at least 13 spikes of 15 second duration at 40% or above in any 3 minutes spread across the hour to show a violation. The comparison of the two standards shows that it is more likely that violations would be recorded, and therefore would be useable for enforcement cases, using the six-minute averaging standard. There is one known circumstance where the department expects an opacity distribution as above to occur - soot blowing at coal fired power plants. The department retained an aggregate standard for that type of emissions unit. Therefore, the department has concluded that for most circumstances, opacity standards based on a six minute averaging period are more stringent than standards based on three minute aggregate readings. Based on that conclusion the department replaced the three minute aggregate standards, except for emissions units for which we found that conclusion not to apply. We request EPA to accept that same conclusion and approve the department's current opacity regulations as part of the State Implementation Plan.