May 17, 2018

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Re: GPA Midstream Association OOOOa White Paper Supplemental Information-Compressor Station Leak Rates Data Analysis

As we discussed previously, GPA Midstream believes EPA should simplify and revise the frequency of leak detection and repair monitoring at gathering and boosting compressor stations under EPA's OOOOa regulations. In March of 2018, GPA Midstream provided EPA with data on leak rates and leak counts from five different companies and 110 gathering and boosting compressor stations across the country. This data strongly supports GPA Midstream's request to move from quarterly to annual leak monitoring.

There are two clear trends that can be seen in the data:

1. Actual leak rate percentages are lower than EPA estimates

In the technical support document titled "Estimation of Potential Emission Reductions with the Implementation of a Method 21 Monitoring Program," EPA details the calculations and assumptions used in the OOOOa rulemaking to justify the quarterly leak detection monitoring frequency. In "Appendix A-Method 21 Emissions Reduction Calculations" EPA uses two different sets of calculations, one set for a leak rate of 500 ppmv and the other set for a leak rate of 10,000 ppmv. For this comparison, GPA Midstream utilized the 10,000 ppmv calculations.

Within Appendix A there is an assumed initial leak frequency (X) of 7.49%. As can be demonstrated by the data that was provided on the 110 compressor stations, 7.49% is well above the initial leak frequency of any of the sites provided. Of the 83 compressor stations that provided leak percentages, the average initial leak frequency is 0.48%. The 0.48% average initial leak frequency is also well below EPA's calculated final leak frequency (F) for annual (4.26%), semiannual (3.29%) and quarterly monitoring (2.33%).

2. Following initial monitoring and repair, leak frequencies generally decrease

GPA Midstream's data demonstrates that a lower final leak frequency can be achieved by less frequent monitoring of compressor stations. Within EPA's "Appendix-A Method 21 Emissions Reduction Calculation," the final leak frequency for 10,000 ppmv is listed as 4.26% for annual, 3.29% for semiannual and 2.33% for quarterly monitoring. This is reduced from the initial leak

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frequency of 7.49% after six monitoring events at the specified frequency. Of the five companies that submitted data, two submitted data at an annual monitoring frequency, no companies that submitted semiannual data, and four companies submitted quarterly data (three of which had leak percentages). Regardless of the monitoring frequency, all data shows reduced leak rates following initial monitoring. This indicates a quarterly monitoring schedule is not required to achieve reduced fugitive emission leak rates.

Below are the comparisons to EPA calculations:

> Quarterly Monitoring- In its technical documents, EPA calculated that after six quarterly monitoring events, the final leak frequency would reduce down to 2.33%. Using actual quarterly monitoring data provided by three of the five GPA Midstream member companies, the final leak frequency was reduced down to 0.39%.
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> This number was developed by averaging the percentage of total leaking components from each sixth monitoring event where available. At facilities that had not yet performed six monitoring events, data from the fourth monitoring event was used. Facilities that had not performed at least four quarterly monitoring events were not utilized in the average. In all, there were 38 sites that had at least four quarterly monitoring events. When the leak frequencies were averaged together the average final leak frequency was found to be 0.39%, which is less than half of the initial estimates made by the EPA.
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> Annual Monitoring- In its technical documents, EPA calculated that after six annual monitoring events, the final leak frequency would be 4.26%. Using actual annual monitoring data provided by two of the five GPA Midstream member companies, the final leak frequency was reduced down to 0.012%.
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> In order to evaluate the leak percentage of the sixth monitoring event, it would require six years of data, which neither of the two companies has. Therefore, when determining the final leak frequency, the most recent monitoring event was used. Annual monitoring was performed at 22 sites and the average final leak frequency across those sites was 0.012%. This is well below EPA's calculated final leak frequency of 4.26% for annual monitoring.

In the technical documents, EPA decided upon quarterly monitoring to keep the final leak frequency below 2.33%. The actual monitoring data from the gathering compressor stations outlined above demonstrates final leak frequency rates under 2.33% can be achieved with annual monitoring.

Given this, GPA Midstream reiterates its request that EPA reduce the monitoring frequency in OOOOa to annual leak detection monitoring for gathering and boosting compressor stations. Annual monitoring would still meet EPA's goal of a low final leak frequency, while limiting the burden of unnecessary costs on the industry.

Respectfully submitted,

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