



Proposed Appendix to the Landfill Project Reporting Protocol Version 2.1

Element Markets

Public Comments Submittal

Data Substitution and Failed Calibration

Overall, Element Markets agrees with the design of the methods for dealing with data substitutions and failed calibrations. We are appreciative of the Climate Action Reserve taking a proactive approach in improving the Landfill Project Reporting Protocol Version 2.1 (Protocol).

However, we believe that further detail around the proposed data substitution method might be warranted to further ensure that all types of landfill gas projects can apply this method appropriately.

Under the Protocol, a continuous methane analyzer is the preferred option for monitoring methane concentrations. The Protocol also allows for the alternative approach of weekly methane concentration measurements using a calibrated portable gas analyzer and accounts for uncertainty around this option by applying a 10% discount factor to the total quantity of methane collected and destroyed. Within the Table found on page 2 of the Data Substitution and Failed Calibration Proposal, substitution methodologies are explained for different durations of missing data. The Table notes that if the duration of missing data is “greater than one week”, then “no data may be substituted and no credits may be generated.” Our concern is around using this method for the substitution of methane concentrations, when a project is using the allowed option of weekly methane concentration measurements with the appropriate discount. If a project is only monitoring methane concentrations on a weekly basis, then a situation could arise where the methane concentration reading is not done exactly one week from the previous reading due to a variety of unintentional factors (scheduling, operational issues, etc.). We believe that this could lead to projects being unnecessarily penalized, and would suggest that a data substitution procedure for weekly methane monitoring be drafted for inclusion in this appendix.

A few examples of situations that could arise:

1. A landfill measures its methane concentration on a weekly basis every Monday. On a given Monday, the landfill technician that usually records the methane concentration measurements has to take the day off unexpectedly and forgets to pass on his responsibilities to another employee. The methane concentration measurement is not taken until Tuesday. Based upon the Data Substitution Proposal, the previous week’s data in this example would not be permissible for quantification even if the methane measurement is only taken one day late.
2. A landfill measures its methane concentration on a daily basis during the work week (5 data points per week) but uses the weekly approach under the Protocol and applies the appropriate



discount factor of 10%. During the initial months of the operation for this new landfill gas capture system, there have been issues with the landfill operationally, which have led to inconsistent measurements of methane concentration, resulting in a few time periods where the landfill has no methane concentration measurements for a greater than one week period. However, besides those few periods of missing data, the landfill has a large amount of daily readings of methane concentrations. Even though multiple other data points surrounding the outage periods exist, because the duration of missing data greater than one week, these daily readings cannot be utilized for substitution. An example –

July 6 - July 10: Daily methane concentration readings

July 11 – July 18: No methane concentration reading taken

July 20 – July 24: Daily methane concentration readings

It seems that in this example, a plausible solution to generate a weekly methane concentration for July 11 – July 18 would be to use the averages of the previous and/or later week's concentrations as an appropriate substitution.

As noted previously, Element Markets agrees with overall design of the proposed methods for data substitution and failed calibrations. However, we believe that additional consideration should be given to adequate data substitution methods for projects that are using the option of weekly methane concentration measurements. If the Climate Action Reserve has any further questions, please don't hesitate to contact us. We appreciate the opportunity to comment on these important Protocol modifications.

Respectfully Submitted,

Element Markets