

Question 6.5

Topic: Use of Diluent Cap with High Percent Moisture

Question: When using the diluent cap with Equations 19-3, 19-5, F-14a or F-17 it is possible to have unrepresentative or negative results if the percent moisture is high. How do I use these equations with the diluent cap?

Answer: The Agency has developed special variations of Equations 19-3 and 19-5 for use with the diluent cap, which are included in Table 29 of the ECMPS Monitoring Plan Reporting Instructions in Section 9.0. These equations (19-3D and 19-5D) are to only be used during any hour in which the diluent cap is used in place of Equations 19-3, and 19-5. When these equations are used, include each equation in a <MonitoringFormulaData> record and assign a unique formula ID as described in the reporting instructions. Use the correct formula ID when reporting the hourly NO_x emission rate data in the <DerivedHourlyValueData> record to show when these special formulas are used in lieu of the main equations. Prior to January 24, 2008, the Agency had also allowed the use of special variations of equations F-14a and F-17. However, on January 24, 2008 Part 75 was revised to no longer allow the use of the diluent cap in calculations other than for determining NO_x emission rate. Instead, for instances where the use of Equation F-14a results in a negative CO₂ concentration, or whenever the use of Equation F-17 results in a heat input rate less than or equal to 0.0 mmBtu/hr, substitute for the calculated value as follows:

- _ If you use Equation F-14a to determine percent CO₂ from percent O₂, and the calculated result is a negative value, replace the calculated value with 0.0% CO₂ and report a MODC of "21" for that hour in the <DerivedHourlyValueData> record.
- _ If you use Equation F-17 for heat input, and the calculated result is less than or equal to zero, replace the calculated value with 1.0 mmBtu/hr and report a MODC of "26" for that hour in the <DerivedHourlyValueData> record.

References: Appendix F, § 4.4.1 , and § 5; 40 CFR Part 60, Appendix A, RM 19

History: First published in March 2000, Update #12; revised in 2013 Manual