

Posting type Advisory

Subject Changes in redelivery of 1/2005 through 5/2014 data

Module/Species All

Sites All

Period January 1, 2005 – May 31, 2014

Recommendation Be aware that several changes have been applied to data from 1/2005 through 5/2014. Updated data are available from FED website as of April 20, 2015.

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Supporting information

The matrix below shows the changes to be expected in data available from FED as of April 20, 2015 compared to the old ones.

Change	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
A1)	C	C	C	C	C	NC	NC	NC	NC	NC
A2) + A3)	C	C	C	C	C	C	C	C	C	NC
B)	C	C	C	C	C	C	C	C	C	NC
C)	C	C	C	C	C	C	C	C	C	NC
D)	C	C	C	C	C	NC	NC	NC	NC	NC
E)	C	C	C	C	C	C	C	C	C	C
F)	NC	NC	NC	NC	NC	NC	C	C	C	NC

* C = Changed; NC = Not changed

* Affects data through May 2014. After May 2014, all data will be delivered with these new processing rules.

Descriptions of Changes Listed in Matrix

- A) Carbon concentrations, minimum detection limits (MDL) and uncertainties
 - A1) Used field blanks rather than secondary filters to perform blank correction. For details, please refer to the Data Advisory on “Change to artifact correction method for organic carbon fractions”.
 - A2) The mdl and uncertainty equations were modified by introducing the standard deviations of the OC/EC quoted by DRI to serve as floor values for both the MDL and uncertainty estimates.
 - A3) The values used to calculate the multiplicative errors for the carbon measurements were updated.
- B) Filter-based light absorption measurements: Fabs, MDL, and uncertainty fields
 - The equations for calculating these values were modified. For details, please refer to the Data Advisory on “Changed Reporting of Light Absorption”.
- C) Ions MDL and uncertainties
 - 1) Both equations modified by adding the analytical detection limits as the floor values.

2) The values used to calculate the multiplicative errors for the ion measurements were updated to be based on uncertainties in the IMPROVE collocated observations.

D) Flow rates (flow_a, flow_b, flow_c, flow_d)

Temperature equation was changed, which slightly impacted calculated flow rates.

E) Sample status (flag_a, flag_b, flag_c, flag_d)

1) The duration criteria for the flags related to clogging of PM_{2.5} filters

- CL: flow rate < 15 LPM and
- CG: flow rate < 18 LPM

were changed to be applied only if the flow rate dropped below these levels for >6 hours instead of >1 hour.

2) The criteria for the clogging of PM₁₀ filters were changed from

- CL: flow rate < 14 LPM for >1 hour to flow rate < 10 LPM for >6 hours
- CG: flowrate < 15 LPM for >1 hour to < 14 LPM for >6 hours.

F) XRF concentrations, MDL, and uncertainties

1) Field blank selection criteria for performing blank subtraction were modified slightly.

2) Duplicates measurements in database were properly flagged as such.