



*Florida Department of  
Environmental Protection*

# *Data Validation Philosophy*

National Air Monitoring Conference

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## *Why Philosophy?*

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- Particularly as the EPA has been changing the standards more frequently, and ambient data are being used more frequently for attainment determinations, we are trying to avoid not meeting the goal of legally defensible data
- That goal means that there has to be a chain of evidence from ambient air to AQS





## *Decisions*

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- Update QAPPs for changes in CFR
- Maintain and update SOPs
- How the work of data validation is done is dependent on your agency's philosophy.
  - Do you have to have a reason to get rid of data or
  - Do you have to have a reason to keep it?



# Implications

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- *For general scientific inquiry, to show valid data, the results must be repeatable and legally defensible. To accomplish that, the data must be validated, i.e. shown to be complete and correct.*
- So for example:
- The calibration equipment and gas standards, gases of known concentration, must be traceable to National Institute of Standards and Technology (NIST) and the traceability must be valid at the time of the calibrations, and this includes the standard reference photometer (SRP) certification for ozone. ....
- If the calibration is out of date, are all data null or is there a test of the data, with a calibrated gas and if the analyzer is still within limits the data are acceptable?



## Another example: TEOM Noise

- A noise level of 0.1 hz or higher has been identified by the manufacturer as a level that requires attention
  - Does this specification mean that data will be voided?
  - Or does it mean that explanations for the noise will be sought and if found acceptable, the data left intact?

NOISE\_3

hz

0.074  
0.077  
0.082  
0.085  
0.081  
0.073  
0.086  
0.097  
0.104  
0.091  
0.107  
0.101  
0.110  
0.100  
0.103  
0.104  
0.096  
0.094  
0.088  
0.080  
0.081  
0.089  
0.084  
0.086  

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0.073  
0.110  
0.091



## Results

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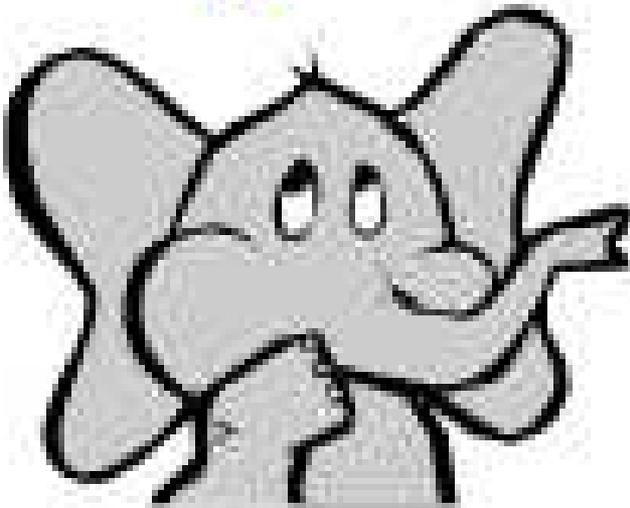
- The philosophy of dealing with your data will
  - Impact how much data you collect
  - And how easily it will be defended





## *Comments or Questions*

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