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AIR QA/QC DEFINITIONS
Figure 1.1. Ambient air ozone traceability scheme
definitions

- Verification: comparing to a standard of a higher authority—NO ADJUSTMENTS
  - Ex: all points lying within 2% of line
  - Leak checks (comparing against stnd of zero)
  - Flow rate within 4% for cont PM
  - Reference membrane if a BAM

- Calibration—change the response
Standards:

- Device that is used as a reference, with stated uncertainty
- Primary standard (no higher authority--NIST)
- National standard (EPA SRP)
- Reference standard, or local primary stnd (highest authority of an organization)
- Transfer standard relates (with SOP) a parameter to a higher authority stnd via a transportable device

Each has stated uncertainty
certification

- The process and documentation of comparison to a higher authority standard within required limits, for how well this standard compares against a standard of higher authority.
- Each step of the chain from NIST down to your field instrument should have a certification and you should have copy (should be included in your local primary standard documentation).
Measurement Quality Objectives:

- Are Performance Requirements
  - Ozone
    - 90% confidence limit for the CV of 15%
    - 95% confidence limit for absolute bias of 7%
  - PM2.5 (contin and manual) goals for meas uncertainty
    - 10% for total precision
    - +- 10% for total bias