

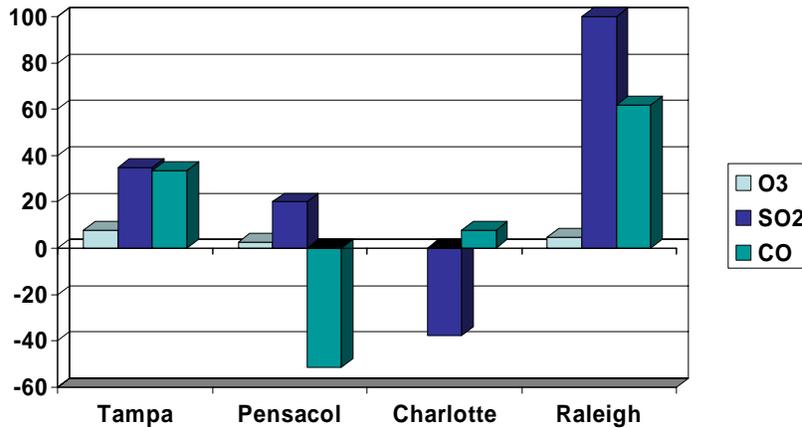
LOW AUDIT CONCENTRATION LEVEL

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Trace Level Audit Data

- Data for 2 Precursor Gas sites in NC and 2 in FL, O₃, CO and SO₂, Levels 1 to 3
- Look at NPAP vs Agency Results in PPM Difference vs vs % D
- Can we use %D for Levels 1 &2?

Level 1, % Difference



Comparison of Actual Difference and Percent Difference

| Audit Point | Difference in ppb | | % Difference | |
|----------------|-------------------|--------|--------------|------|
| | SO2 | CO | SO2 | CO |
| Level 3 SO2/CO | -0.006 | -0.113 | 7.9 | 6.3 |
| Level 2 CO | -0.004 | -0.083 | 10.2 | 10.0 |
| Level 2 SO2 | -0.001 | -0.019 | 28.2 | 15.8 |
| Level 1 SO2 | -0.001 | -0.052 | 34.7 | 86.7 |
| Level 1 CO | -0.001 | -0.037 | 29.8 | 33.6 |

The percent difference of the SO2 audit level 1 comparison was 34.7%, but the actual difference was only 1 ppb.

The question is... Is a comparison that is within 1 ppb but exceeds 15% still considered a failing grade?

Summary Regarding PPM or PPB Difference Acceptance Limit

- As accumulate more NCORE Audit Data, apply upper and lower Bound approach to determine Acceptance limits for the Gases.

Issues with Auditing Trace Level Analyzers

For Starters...

- What do we use to express audit results to determine pass or fail?
- Lower tank gas concentrations are needed. Lower concentrations may require 6 month recertification, more cost.
- May need lower flow mass flow controllers
- What audit gas is appropriate for testing the NO_y converter efficiency and performing the NO_y audit?
- Is it reasonable and safe to audit through the probe of NO_y at the top of a 10m mast?
- If multiblend tanks are used, new concentrations will be needed, more cost.

Data Recording Issues

- Consider More Digits for Levels 1, 2
- Have as many as we need.
- Do not drop any in calculations (in Workbook)
- Consider NOT Rounding off in going from Worksheet to Individual report to Summary Report.