

PROCEDURE 2
PROCEDURE FOR FIELD AUDITING GC ANALYSIS

Responsibilities of the audit supervisor and analyst at the source sampling site include the following:

- (A) The audit supervisor certifies that audit cylinders are stored in a safe location both before and after the audit to prevent vandalism.
- (B) At the beginning and conclusion of the audit, the analyst records each cylinder number and pressure. An audit cylinder is never analyzed when the pressure drops below 200 psi.
- (C) During the audit, the analyst performs a minimum of two consecutive analyses of each audit cylinder gas. The audit must be conducted to coincide with the analysis source test samples, normally immediately after GC calibration and prior to sample analyses.
- (D) At the end of audit analyses, the audit supervisor requests the calculated concentrations from the analyst and compares the results with the actual audit concentrations. If each measured concentration agrees with the respective actual concentration within ± 10 percent, he directs the analyst to begin analyzing source samples. Audit supervisor judgement and/or supervisory policy determine action when agreement is not within ± 10 percent. When a consistent bias in excess of 10 percent is found, it may be possible to proceed with the sample analysis, with a corrective factor to be applied to the results at a later time. However, every attempt should be made to locate the cause of the discrepancy, as it may be misleading. The audit supervisor records each cylinder number, cylinder pressure [at the end of the audit], and all calculated concentrations. The individual being audited must not under any circumstance be told actual audit concentrations until calculated concentrations have been submitted to the audit supervisor.

FIELD AUDIT REPORT

Part A. - To be filled out by organization supplying audit cylinders.

1. Organization supplying audit sample(s) and shipping address:

2. Audit supervisor, organization, and phone number:

3. Shipping instructions: Name, Address, Attention:

4. Guaranteed arrival date for cylinders: _____

5. Planned shipping date for cylinders: _____

6. Details on audit cylinders from last analysis:

	Low conc.	High conc.
a. Date of last analysis.....
b. Cylinder number.....
c. Cylinder pressure, psi.....
d. Audit gas(es)/balance gas.....
e. Audit gas(es), ppm.....
f. Cylinder construction.....

Part B. - To be filled out by audit supervisor.

1. Process sampled: _____

2. Audit location: _____

3. Name of individual audit: _____

4. Audit date: _____

5. Audit results:

	Low conc. cylinder	High conc. cylinder
a. Cylinder number.....
b. Cylinder pressure before audit, psi.....
c. Cylinder pressure after audit, psi.....
d. Measured conc., avg. of two injections.....
e. Audit conc., ppm (Part A, 6e).....
f. Audit accuracy ¹
g. Problems detected (if any).....

¹Results of two consecutive injections that meet the sample analysis criteria of the test method.
 Percent accuracy = (Measured conc. - Actual conc.)/(Actual conc.) x 100