July 24, 1996

MEMORANDUM

SUBJECT: Guidance for SRMs and NTRMs Certified
by NIST between 1989 and 1996

FROM: Andrew E. Bond, Acting Chief
Quality Assurance Branch (MD-77B)
AMRD/National Exposure Research Laboratory
Research Triangle Park, NC 27711

TO: Suppliers of Protocol Gases

The National Institute of Standards and Technology (NIST) has informed us that they are adjusting the SO_2 concentrations in the Standard Reference Materials (SRMs) and the NIST Traceable Reference Materials (NTRMs) that were certified between 1989 and May 31, 1996. The adjustments are required as the result of an intercomparison between the traditional titration method and a gravimetrically prepared standard.

We are aware that some of these SRMs and NTRMs have been used in the past or may be used in the future to certify Protocol Gases either directly or through the use of Gas Manufacturer's Intermediate Standards (GMISs) traceable to these SRMs and NTRMs. No later than September 1, 1996 all new Protocol Gases produced or sold are required to be based upon the adjusted SRM/NTRM value. This includes gases produced using GMISs. In addition, Protocol Gases produced using adjusted SRM/NTRMs should be tagged with a code "R" before the SRM number to indicate that the adjustment has already been made (i.e. "SRM 1693a" would be changed to "SRM R1693a" on the Protocol Gas certificate/cylinder labels).

Some of the Protocol Gases presently in use or previously used in conformance to 40 CFR Parts 58, 60, 61 and 75 may also require an SO_2 concentration "adjustment." This includes gases
used for stack CEMS and reference method testing. It is acceptable to re-issue certificates and cylinder labels with the corrected gas values. If this approach is followed, the new certificate and cylinder labels should be tagged with a code R in the SRM number to indicate that the adjustment has been made.

We are aware that issuing new certificates and labels for affected Protocol Gases could be costly and time consuming. Therefore, it is also acceptable to EPA if the owners of Protocol Gases hand-correct their certificates and cylinder labels. If this approach is followed, owners of Protocol Gases should attach documentation to the certificate indicating the unadjusted concentration, the adjustment factor, and the new adjusted concentration (this may include a letter from the supplier of the Protocol Gas indicating the "adjustment factor" they should use). A sample standard form and a blank form for making these hand corrections are attached. The EPA regulatory units concerned with 40 CFR Parts 58, 60, 61 and 75 have concurred with this approach.

Protocol Gas users must implement the adjustment no later than January 1, 1997. Each EPA regulatory unit may issue additional guidance about how this adjustment will affect their program.

We would appreciate it if you would notify your Protocol Gases users of the required "adjustment" to their SO_2 concentration. Please feel free to include a copy of this letter with your correspondence.

If you have questions please feel free to contact Ms. Avis Hines of my staff at 919-541-4001 or by FAX 919-541-7953.

Attachments

cc: Avis Hines, MD-77B
Bill Mitchell, MD-77B
Ross Highsmith, MD-78A
Jim Vickery, MD-75
John Silvasi, MD-14
John T. Schakenbach, 6204J

SAMPLE STANDARD FORM

EPA Cylinder Gas
SO_2 Concentration Adjustment

Gas Cylinder Data:

Gas Supplier: Gas Vendor
Cylinder No.: XXX123
Certification Date: 7/25/96
Expiration Date: 7/25/99
Type of Cylinder: P
(P=protocol, G=GMIS, N=NTRM, S=SRM)

Original SO_2 concentration, $C(SO_2)_{ori}$: 90.81 ppm

Corrected SO_2 concentration, $C(SO_2)_{cor}$: 92.70 ppm

$C(SO_2)_{cor} = C(SO_2)_{ori} * F_{cor}$

Gas Standard* Data:

Standard No.:	SRM-0000
Corrected Standard No.:	SRM-R-0000
Cylinder No:	xxx-456
Expiration date:	7/20/97
Original concentration of the standard, S_{org}: 259.8 ppm	
Correct concentration of the standard, S_{cor}:	265.2 ppm
(from NIST table)	
Correction factor, $F_{cor} = S_{cor} / S_{org}$:	1.021

Signature: _____ Date: _____

* SRMs or NTRMs

EPA Cylinder Gas

SO_2 Concentration Adjustment

Gas Cylinder Data:

Gas Supplier:

Cylinder No.:

Certification Date:

Expiration Date:

Type of Cylinder:

(P=protocol, G=GMIS, N=NTRM, S=SRM)

Original SO_2 concentration, $C(SO_2)_{ori}$:

Corrected SO_2 concentration, $C(SO_2)_{cor}$:

$$C(SO_2)_{cor} = C(SO_2)_{ori} * F_{cor}$$

Gas Standard* Data:

Standard No.:

Corrected Standard No.:

Cylinder No:

Expiration date:

Original concentration of the standard, S_{org}:

Correct concentration of the standard, S_{cor}:

(from NIST table)

Correction factor, $F_{cor} = S_{cor} / S_{org}$:

Signature: _____ Date: _____

* SRMs or NTRMs