UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Research Triangle Park, NC 27711

March 18, 1999

Ms. Mary E. Peterson
Rupprecht & Patashnick Co., Inc.
25 Corporate Circle
Albany, NY 12203

Re: Single-point calibration of temperature and barometric pressure sensors

Dear Ms. Peterson:

This letter is in response to your fax message received on March 16, 1999 regarding calibration of the ambient temperature, filter temperature, and barometric pressure measurement systems in the R&P Partisol-FRM and Partisol-Plus $PM_{2.5}$ samplers (reference methods RFPS-0498-117 and RFPS-0498-118).

We acknowledge that these environmental measurement systems in these samplers accept only a single calibration point, and that the Operating Manuals associated with these samplers prescribe single-point calibration procedures for these measurement systems. These single-point procedures were approved as part of the reference method designations for these $PM_{2.5}$ methods.

Quality Assurance Document 2.12 (April, 1998) recommends a 3-point calibration for sampler temperature measurement systems (Sec. 6.4.1) and outlines a generic 3-point calibration procedure (Sec. 6.4.4). However, Section 6.4 also indicates that the specific calibration procedures approved for these systems for each designated sampler are given in the operation manual associated with each sampler and that the procedures given in the operation manual "...should be followed carefully and thoroughly to calibrate the sampler's temperature sensors." Similar (albeit less specific) recommendations are given for the barometric pressure measurement system. **Sampler users should thus follow the (single-point) calibration procedure given in the Manual.**

Note, however, that while these measurement systems in the R&P samplers can be calibrated at only one point, they can be—and should be—checked or verified at multiple points over their range of measurement. If a calibrated temperature or pressure sensor is found to be outside of the acceptable range at one or more points different from the calibration point, the sensor may need to be repaired or replaced.

I hope this information may help to clarify the EPA requirements and recommendations regarding calibration of these measurement systems in the R&P samplers.

Sincerely,

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