



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711  
OFFICE OF AIR QUALITY PLANNING AND STANDARDS

**Technical Note- Use of PM2.5 Method Designation Codes in QA Collocation Requirements**

May 4, 2018

This guidance clarifies that monitors that were originally designated as federal equivalent methods (FEMs), due to the use of very sharp cut cyclones (VSCC) but re-designated to federal reference methods (FRMs) in 2006<sup>1</sup>, will be considered FRMs when being evaluated against QA collocation requirements. Method codes to be considered FRM for QA purposes are identified in bold in the third column of Table 1.

**Table 1. Method Codes in 2006 Re-designation Memo**

| <u>Method</u>                             | <u>Reference method</u> | <u>Equivalent method</u> |
|---|-------------------------|--------------------------|
|   | <u>WINS</u>             | <u>VSCC</u>              |
| BGI Models PQ200-VSCC, PQ200A-VSCC        | RFPS-0498-116           | EQPM-0202-142            |
| R & P Partisol®-FRM 2000 PM-2.5 FEM       | RFPS-0498-117           | EQPM-0202-143            |
| R & P Partisol® 2000 PM-2.5 FEM Audit     | RFPS-0499-129           | EQPM-0202-144            |
| R & P Partisol®-Plus 2025 PM-2.5 FEM Seq. | RFPS-0498-118           | EQPM-0202-145            |
| Thermo Electron RAAS2.5-100 FEM           | RFPS-0598-119           | EQPM-0804-153            |
| Thermo Electron RAAS2.5-200 FEM           | RFPS-0299-128           | EQPM-0804-154            |
| Thermo Electron RAAS2.5-300 FEM Seq.      | RFPS-0598-120           | EQPM-0804-155            |

The QA collocation requirements (40 CFR Part 58 Appendix A Section 3.2.3) states: “A *primary monitor designated as an EPA FRM shall be collocated with a quality control monitor having the **same EPA FRM method designation***”. Since EPA has re-designated the samplers with VSCC as FRMs, EPA will ensure that collocated PM2.5 monitors whose primary monitor is one of the seven listed in the VSCC column above will be collocated with a FRM of the method code designation. As an example, if a primary monitor is a BGI Model PQ200-VSCC (method code 142) it is considered an FRM and must be collocated with the a BGI Model PQ200-VSCC (method code 142).

We do want to continue to distinguish monitors that use WINS impactors from those using VSCC. For example, if a primary monitor is a BGI Model PQ200 using a WINS (method code 116) it must be collocated with a BGI Model PQ200 using a WINS (method code 116) and **not** with the PQ200-VSCC

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1 Notice of EPA Re-designation of Certain Equivalent Methods for PM2.5  
<https://www.epa.gov/sites/production/files/2017-02/documents/redesgvsc.pdf>

(method code 142) since it is not the same EPA FRM method designation. Table 2 provides a portion of the List of the Designated Reference and Equivalent Methods<sup>2</sup> identifying the proper coding for the example above. As footnote “a” indicates, whether the method originally had been designated as an FEM, since it has been re-designated as an FRM, EPA considers it an FRM for QA purposes.

From our review of AQS data, it appears most of monitoring organizations have the PM2.5 manual samplers properly coded and meeting collocation requirements. In 2019, AQS will revise QA reports (e.g. AMP256 and AMP600) to ensure that PM2.5 collocation is based on proper coding of manual samplers.

**Table 2. Partial list of PM2.5 Designated Reference and Equivalent Methods**

| Particulate Matter – PM <sub>2.5</sub>                    |                                   |                          |
|---|-----------------------------------|--------------------------|
| PM <sub>2.5</sub> Samplers                                |                                   |                          |
| Method  | Designation No. <sup>a</sup>      | Method Code <sup>b</sup> |
| Andersen Model RAAS2.5-200 Audit with WINS                | RFPS-0299-128                     | 128                      |
| BGI or Mesa Laboratories Inc. PQ200/200A with WINS        | RFPS-0498-116                     | 116                      |
| BGI or Mesa Laboratories Inc. PQ200-VSCC™ or PQ200A-VSCC™ | RFPS-0498-116 or<br>EQPM-0202-142 | 142                      |

<sup>a</sup> For cases with two designation numbers, these methods are dual designated as FRM and FEM. However, where a method is dual designated, EPA considers the method an FRM for purposes of ensuring QA requirements are met.

<sup>b</sup> Method code as available in the AQS data system

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<sup>2</sup> <https://www.epa.gov/amtic/air-monitoring-methods-criteria-pollutants>