

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

I. Introduction

The purpose of this document is to provide guidance for complying with the Emission Collection and Monitoring Plan System (ECMPS) reporting requirements related to the amendments to the Protocol Gas Verification Program (PGVP) and Minimum Competency Requirements for Air Emissions Testing (AETB). The final rule was published in the Federal Register (FR) on March 28, 2011. A copy of the rule is available on Regulations.gov (<http://www.regulations.gov/>) in Docket No. EPA-HQ-OAR-2009-0837 and on <http://www.epa.gov/airmarkets/emissions/pgvp.html>. These amendments have new record keeping requirements that include the submission of additional data elements in the files reported to EPA via ECMPS. The March 28, 2011 rule requires PGVP information to be recorded starting on September 26, 2011, and submitted prior to or concurrent with the submittal of the third quarter 2011 electronic quarterly emissions report. AETB information must be recorded starting on March 27, 2012, and submitted prior to or concurrent with the submittal of the first quarter 2012 electronic quarterly emissions report. The direct final rule corrections published in the Federal Register on August 12, 2011 do not affect the PGVP or AETB programs in any way. For more information, see the EPA website at <http://www.epa.gov/airmarkt/emissions/pgvp.html>.

EPA has recently reevaluated the submission format of the existing PGVP Gas Type Code data element and determined that changes were necessary to better capture and simplify the reporting of this data. This change is effective beginning with the release of the Q1 2013 ECMPS Client Tool in March 2013. Submissions of all emissions and QA data (including resubmissions of prior quarters) will need to follow this format beginning with the Q1 2013 submission period. This is a format change to this data element only; no other data elements are affected.

In accordance with the record keeping requirements of these amendments, the ECMPS XML file schemas and Client Tool application were changed beginning in March 2011, with additional refinement in subsequent releases. Special items of note during the 2013 Q1 implementation period and beyond:

- Vendor ID's are year specific. The vendor ID at the time of the cylinder's certification should be used for reporting purposes. For example, if a cylinder was certified on December 15, 2012, the 2012 vintage vendor ID year should be reported even if the cylinder is not placed into service until 2013.
- Report Gas Type Code "AIR" when using conditioned and purified ambient air that meets either paragraphs (2) or (3) in the zero air material definition in § 72.2 that is produced by a CEMS or CEMS conditioning system, only when it is used as a high-level O₂ gas for an oxygen analyzer. Do not report AIR when used to zero an analyzer. Do not report the Cylinder ID, PGVP Vendor ID, or the Expiration Date. [Note: Part 75, Appendix A, § 2.1.3 only allows purified instrument air to be used as a high-level calibration material for an oxygen analyzer, not ambient air in a cylinder, unless the cylinder is an oxygen calibration gas meeting the requirements in Part 75, Appendix A, Section 5.1.]

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

The following is a summary of the changes that have been made to the ECMPS XML file schemas and Client Tool application as result of the format changes to the GasTypeCode data element:

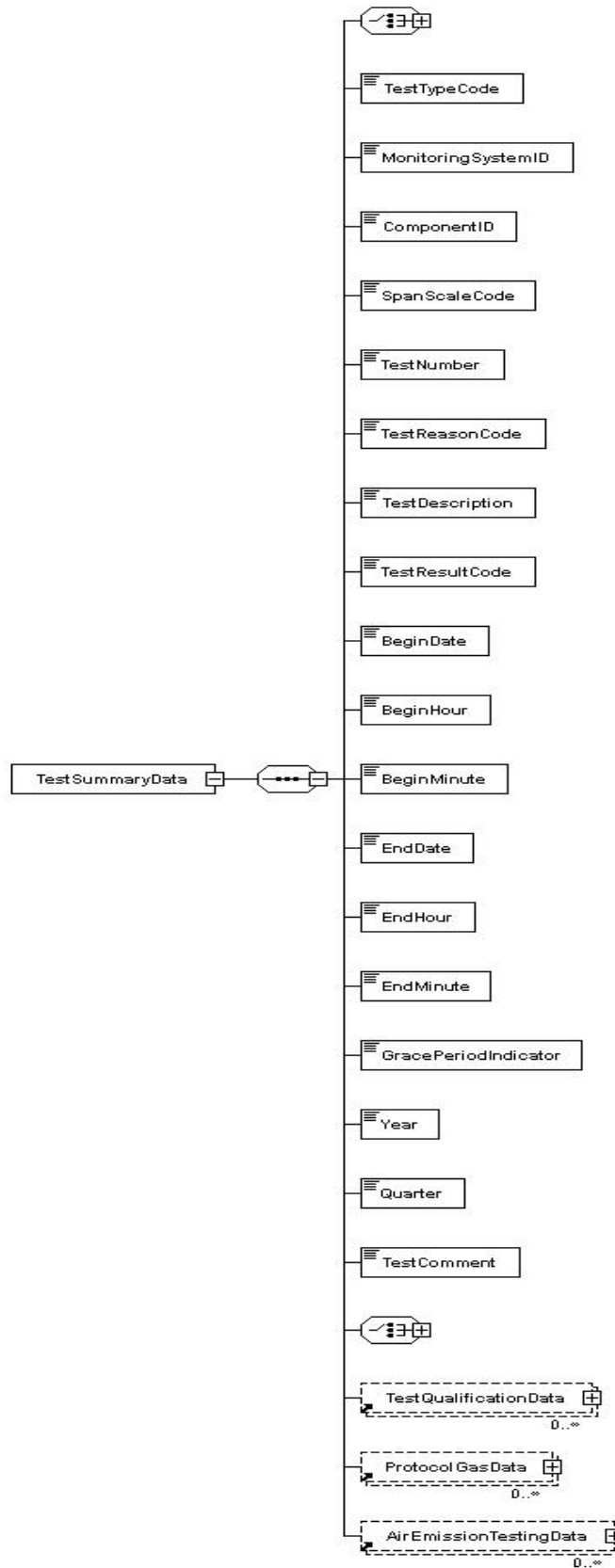
- The GasTypeCode data element is now a comma delimited list of Gas Component Codes with a maximum length of 255 characters. Users should report one or more of the certified components (See Table 2 below) contained in the cylinder. Users must also report the balance gas of each cylinder as either BALA (Air) or BALN (Nitrogen).
- The previous GasTypeCode list that identified specific blends or mixtures of gases is no longer supported. Table 3 is provided at the end of the document as a crosswalk to convert the previous mixtures into a list of one or more certified component codes.
- Reporting APPVD, AIR, SRM, NTRM, GMIS, RGM, PRM, or ZERO is considered a cylinder type. Do not report certified gas components when using these codes.
- The revised XML schemas have been posted on the ECMPS Support Website.

II. QA and Certification Data Reporting Instructions

Two complex data elements have been added to the QA and Certification Data schema: the PROTOCOL GAS DATA record for reporting the new PGVP data elements and the AIR EMISSION TESTING record for reporting the new Air Emission Test data elements. Both records are direct dependents of the TEST SUMMARY DATA record (Figure 1).

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

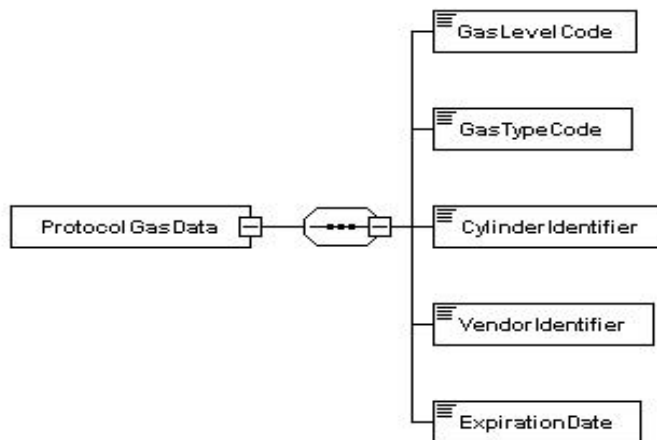
**Figure 1
TEST SUMMARY DATA XML Elements**



ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

A. PROTOCOL GAS DATA

Figure 2
PROTOCOL GAS DATA XML Elements



Description of Data

Report a PROTOCOL GAS DATA record for each cylinder of gas used during the performance of a linearity check or during a RATA conducted using one of the instrumental reference methods (6C, 7E, or 3A). For a linearity check report a record for each cylinder that contains the reference gases. A minimum of three records should be reported, one for each gas level (High, Mid, and Low) of the test. For RATA, Appendix E, and LME fuel or unit default tests conducted using Method 6C, 7E, or 3A report one record for each cylinder used to determine analyzer calibration error, drift, and system bias. A minimum of three records should be reported, one for each gas level (High, Mid, and Low).

Specific Considerations

- You must report a PROTOCOL GAS DATA record when using standard reference material, NIST-traceable reference material, gas manufacturer's intermediate standard, research gas mixture, or SRM-equivalent compressed gas primary reference material in place of an EPA Protocol gas. Report all data elements in this record except the PGVP Vendor ID.
- Per §75.21(g)(6), you may use a non-expired EPA Protocol gas acquired from a vendor not participating in the PGVP as long as the cylinder was acquired prior to May 27, 2011. Report a PROTOCOL GAS DATA record for each cylinder acquired from a vendor not participating in the PGVP program. Report all data elements, reporting "NONPGVP" as the PGVP Vendor ID.

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

**Table 1
Cylinder Compliance Dates**

	On or Before May 27, 2011	After May 27, 2011	Need to Procure from PGVP Participant?
Certified	X		No
Ordered	X		
Certified		X	Yes
Ordered		X	
Certified	X		No
Ordered		X	
Certified		X	No
Ordered	X		

Note: Official recordkeeping and reporting of PGVP Vendor IDs starts on September 26, 2011. If an EPA Protocol gas production site is removed from the list of PGVP participants on the same date as or after the date on which a particular cylinder has been certified or ordered, continue to report the PGVP Vendor ID for that cylinder. When the fourth column of Table 1, above, says “No”, report “NONPGVP” as the PGVP Vendor ID.

- When conducting a RATA of a NOX-diluent monitoring system, report a PROTOCOL GAS DATA record for each cylinder used to determine analyzer calibration error, drift, and system bias for both the NOX and the diluents components of the reference method monitoring system. If you use separate cylinders for the NOX and the diluent gas, you should report at least six records, one for each gas level (High, Mid, and Low) of each gas. If you use cylinders that contain a blend of the NOX and the diluent gas, you should report at least three records, one for each gas level (High, Mid, and Low) of the blend.

PROTOCOL GAS DATA Elements

Gas Level Code

Required: Yes

Element Name: GasLevelCode

Report a calibration gas level code of HIGH, MID, or LOW to indicate the concentration of the gas in the cylinder. The definition of a high-level, mid-level, and low-level calibration gas can be found in the Part 75, Appendix A, Section 5.2, and in EPA Reference Method 7E for RATAs.

Gas Type Code

Required: Yes

Element Name: GasTypeCode

Report one or more of the certified gas component codes in Table 2 to indicate the certified components in the cylinder. Also report the balance gas of each cylinder as either BALA (Air) or BALN (Nitrogen). If you report APPVD, AIR, SRM, NTRM, GMIS, RGM, PRM, or ZERO these are considered “stand-alone” cylinder types, do not report certified components codes when reporting these codes.

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

**Table 2
EFFECTIVE Q1 2013
Gas Type Codes and Descriptions**

Code	Description
SO2	EPA Protocol Certified Gas Component SO ₂
NO	EPA Protocol Certified Gas Component NO
NO2	EPA Protocol Certified Gas Component NO ₂
NOX	EPA Protocol Certified Gas Component Total Oxides of Nitrogen
N2O	EPA Protocol Certified Gas Component Nitrous Oxide
CO2	EPA Protocol Certified Gas Component CO ₂
CO	EPA Protocol Certified Gas Component CO
O2	EPA Protocol Certified Gas Component O ₂
PPN	EPA Protocol Certified Gas Component Propane
CH4	EPA Protocol Certified Gas Component Methane
HE	EPA Protocol Certified Gas Component Helium
H2S	EPA Protocol Certified Gas Component Hydrogen Sulfide
BALA	Balance Gas is Air
BALN	Balance Gas is Nitrogen
APPVD	Other EPA-approved EPA Protocol gas blend (see note below). Do not report certified components when using this code.
AIR	Zero Air Material (instrument air with no cylinder and meeting the requirements of paragraphs (2) or (3) of the ZAM definition in § 72.2). This code is reported only when it is used as a high-level O ₂ gas for an oxygen analyzer. Do not report AIR when used to zero an analyzer. Do not report certified components when using this code.
SRM	Standard reference material. Do not report certified components when using this code.
NTRM	NIST-traceable reference material. Do not report certified components when using this code.
GMIS	Gas manufacturer's intermediate standard. Do not report certified components when using this code.
RGM	Research gas mixture. Do not report certified components when using this code.
PRM	SRM-equivalent compressed gas primary reference material. Do not report certified components when using this code.
ZERO	Zero gas (meeting the definition of "Zero Air Material" in §72.2) used for the low level calibration of a reference analyzer used in RATA testing. Do not report certified components when using this code.

Note: If you use a blend of EPA Protocol gases that is not present in this table, you may report a value of "APPVD", but you will need to contact EPA before submitting the data in order to get permission to use this code.

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

Cylinder Identifier

Required: No

Element Name: CylinderIdentifier

Report the vendor-assigned identification or serial number found on the cylinder.

For AIR or ZERO, leave this field blank.

Vendor Identifier

Required: No

Element Name: VendorIdentifier

For an EPA Protocol gas, report the EPA-assigned PGVP Vendor ID of the production site that supplied the cylinder. An up-to-date list of PGVP Vendor IDs is located on the EPA website <http://www.epa.gov/airmarkets/emissions/pgvp-detail.html>, and can also be accessed via the ECMPS Support website.

Report "NONPGVP" if the cylinder was purchased from a non-participating vendor on or prior to May 27, 2011 (see Table 1 Note, above).

Leave this field blank if the Gas Type Code is AIR, ZERO, SRM, NTRM, GMIS, RGM, or PRM.

Expiration Date

Required: No

Element Name: ExpirationDate

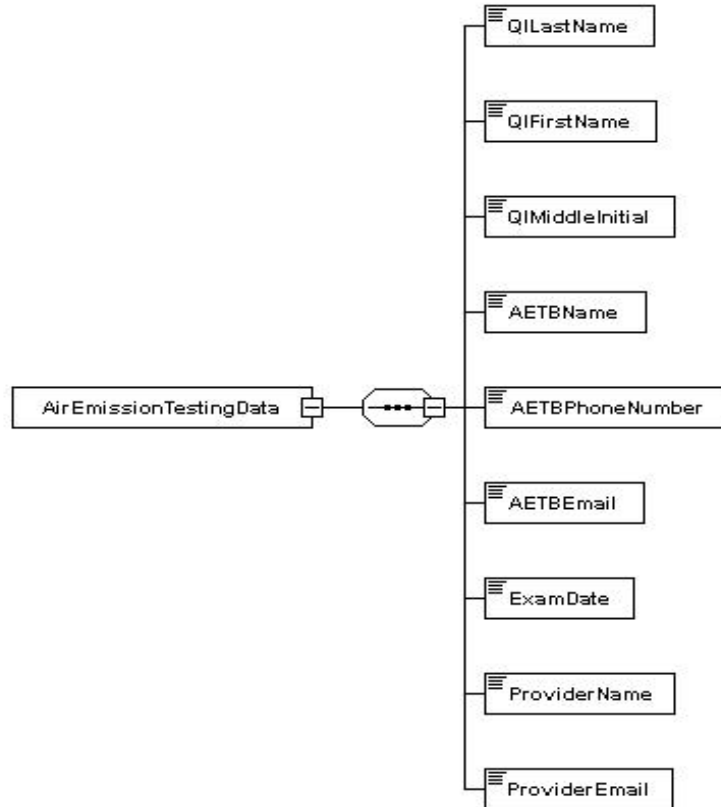
For an EPA Protocol gas, SRM, NTRM, GMIS, RGM, or PRM, report the cylinder's expiration date.

Leave this field blank if the Gas Type Code is AIR or ZERO.

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

B. AIR EMISSION TESTING DATA

**Figure 3
AIR EMISSION TESTING DATA XML Elements**



Description of Data

Report at least one AIR EMISSION TESTING DATA record for each RATA, Appendix E Test, and LME Unit Default Test. One record should be reported for each on-site Qualified Individual from an Air Emission Testing Body who conducted or oversaw the test. The Qualified Individual must be qualified for the methods employed in the test.

AIR EMISSION TESTING DATA Elements

QI Last Name Required: Yes
ElementName: QILastName

Report the last name of the on-site Qualified Individual who conducted or oversaw the test.

QI First Name Required: Yes
ElementName: QIFirstName

Report the first name of the on-site Qualified Individual who conducted or oversaw the test.

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

QI Middle Initial Required: No
ElementName: QIMiddleInitial

Report the middle initial of the on-site Qualified Individual who conducted or oversaw the test.

AETB Name Required: Yes
ElementName: AETBName

Report the name of the Air Emission Testing Body that performed the test.

AETB Phone Number Required: Yes
ElementName: AETBPhoneNumber

Report the phone number of the Air Emission Testing Body that performed the test. The number should contain dashes and be formatted as 999-999-9999. Phone number extensions should not be reported.

AETB Email Required: Yes
ElementName: AETBEmail

Report the email address of the Air Emission Testing Body that performed the test.

ExamDate Required: Yes
ElementName: ExamDate

Report the date that the on-site Qualified Individual took and passed the relevant qualification exam(s) for the reference method(s) that were performed during the test.

Provider Name Required: Yes
ElementName: ProviderName

Report the name of the provider(s) of the qualification test that took place on the exam date.

Provider Email Required: Yes
ElementName: ProviderEmail

Report the email address of the provider(s) of the qualification test that took place on the exam date.

III. Emissions Data Reporting Instructions

One complex data element has been modified in the Emissions schema for reporting the new PGVP data elements related to the daily calibration test: the DAILY CALIBRATION DATA record.

A. DAILY CALIBRATION DATA

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

**Figure 4
DAILY CALIBRATION DATA XML Elements**



ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

New DAILY CALIBRATION DATA Elements

Upscale Gas Type Code

Element Name: UpscaleGasTypeCode

Required: No

For SO₂, NO_X, CO₂, and O₂ components, report one of the gas type codes in Table 2 to indicate the type of gas in the cylinder used for the upscale injection.

Note: If you use a blend of EPA Protocol gases that is not present in this table, you may report a value of "APPVD", but you will need to contact EPA before submitting the data in order to get permission to use this code.

Leave this field blank if the Component Type Code is FLOW or H₂O.

Cylinder Identifier

Element Name: CylinderIdentifier

Required: No

For SO₂, NO_X, CO₂, and O₂ components, report the vendor-assigned identification or serial number found on the cylinder used for the upscale injection.

Leave this field blank if the Component Type Code is FLOW or H₂O or the Gas Type Code is AIR.

Vendor Identifier

Element Name: VendorIdentifier

Required: No

For an EPA Protocol gas, report the EPA-assigned PGVP Vendor ID of the production site that supplied the cylinder used for the upscale injection. PGVP Vendor IDs are year specific, therefore report the assigned PGVP Vendor ID that is applicable on the date the cylinder is certified. An up-to-date list of PGVP Vendor IDs is located on the EPA website <http://www.epa.gov/airmarkets/emissions/pgvp-detail.html>, and can also be accessed via the ECMPS Support website.

Report "NONPGVP" if the cylinder was purchased from a non-participating vendor prior to May 27, 2011 (see Table 1 Note, above).

Leave this field blank if the Component Type Code is FLOW or H₂O or if the Gas Type Code is AIR, SRM, NTRM, GMIS, RGM, or PRM.

Expiration Date

Element Name: ExpirationDate

Required: No

For an EPA Protocol gas, SRM, NTRM, GMIS, RGM, or PRM, report the expiration date of the cylinder used for the upscale injection.

Leave this field blank if the Component Type Code is FLOW or H₂O or if the Gas Type Code is AIR.

ECMPS Reporting Requirements Related to the Amendments to the Protocol Gas Verification Program and Minimum Competency Requirements for Air Emissions Testing

**Table 3 - FOR REFERENCE ONLY
Gas Type Codes Crosswalk**

Discontinued GasTypeCode	Equivalent One or More Certified Components
AIR	AIR
APPVD	APPVD
GMIS	GMIS
NTRM	NTRM
PRM	PRM
RGM	RGM
SRM	SRM
ZERO	ZERO
CO2	CO2
N2C	CO,NO2
N2C2	CO2,NO2
N2CC	CO,CO2,NO2
NC	CO,NO
NC2	CO2,NO
NCC	CO,CO2,NO
NO	NO
NO2	NO2
NX	NO,NO2
NXC	CO,NO,NO2
NXC2	CO2,NO,NO2
NXCC	CO,CO2,NO,NO2
O2	O2
OC	CO,O2
OC2	CO2,O2
OCC	CO,CO2,O2
SC	CO,SO2
SC2	CO2,SO2
SN	NO,SO2
SN2	NO2,SO2
SN2C	CO,NO2,SO2
SN2C2	CO2,NO2,SO2
SN2CC	CO,CO2,NO2,SO2
SNC	CO,NO,SO2
SNC2	CO2,NO,SO2
SNCC	CO,CO2,NO,SO2
SNX	NO,NO2,SO2
SNXC	CO,NO,NO2,SO2
SNXC2	CO2,NO,NO2,SO2
SNXCC	CO,CO2,NO,NO2,SO2
SO	O2,SO2
SO2	SO2
SOC	CO,O2,SO2