

**NISTIR 8279**

**Twenty-Second Annual Report on  
Federal Agency Use of Voluntary  
Consensus Standards and  
Conformity Assessment Activities**

Nathalie Rioux

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# Twenty-Second Annual Report on Federal Agency Use of Voluntary Consensus Standards and Conformity Assessment Activities

Nathalie Rioux  
*Standards Coordination Office  
Standards Services*

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## Twenty-Second Annual Report on Federal Agency Use of Voluntary Consensus Standards and Conformity Assessment Activities

Each year the U.S. Department of Commerce (DOC) provides a report to the Office of Management and Budget (OMB) summarizing federal agency use of government unique standards (GUS) in lieu of voluntary consensus standards (VCS) during the previous fiscal year (FY), as required by Section 12(d)(3) of Public Law 104-113, the National Technology Transfer and Advancement Act of 1995 (NTTAA). By implementing the NTTAA and OMB Circular A-119, *Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities* (Circular A-119), agencies seek to minimize their reliance on GUS by using VCS whenever possible to achieve the following goals:

- reduce costs and regulatory burden;
- provide incentives and opportunities encouraging growth of U.S. enterprises;
- increase agency benefits from private sector expertise.

The FY 2018 summary, prepared by the National Institute of Standards and Technology (NIST), compiles the reports provided by 23 participating agencies listed in Appendix A. In these reports, agencies document any new use of GUS in lieu of VCS during FY 2018 and provide a rationale for each new use. Agencies also list any rescinded GUS in lieu of VCS during the past year. Agencies briefly describe their activities undertaken to carry out provisions described in Circular A-119. Individual agency reports may be found at <https://standards.gov/NTTAA/agency/index.cfm?fuseaction=agencyReports.main>.

VCS, defined in OMB Circular A-119 Sections 2d-e, include standards developed via a process incorporating openness, balance, due process, an appeals process, and a consensus process. GUS, defined in OMB Circular A-119 Section 2c, include standards developed by and for use by the federal government that do not follow the process used in developing VCS.

For FY 2018, federal agencies reported eight new GUS used in lieu of VCS as noted in Appendix B. EPA reported seven GUS dealing with methods for determining emissions of various gases, and one for validating field measurement methods.

As reported in Appendix C, in FY 2018, three GUS used in lieu of VCS were rescinded by agencies. DOT rescinded 49 CFR 571.304, incorporated in 2016. Both EPA Method 25 and EPA Method 25A were incorporated in 2001 and are still in use, however EPA rescinded them from their report as their use does not meet the reporting requirements of the NTTAA.

As reported in Appendix D, two GUS used in lieu of VCS were reported in FY 2016 by DOT but were not included in the FY 2016 Appendix D. These two GUS are now being noted and included in the overall total of GUS reported in lieu of VCS.

## *Summary*

In FY 2018, agencies added eight and rescinded three GUS used in lieu of VCS. In addition, two GUS from FY 2016 are being noted in FY 2018. The resulting additions and rescissions bring the total to 78 reported GUS used in lieu of VCS on record since reporting began in 1997. This analysis does not reflect the use of standards by the Department of Defense (DoD) or the National Aeronautics and Space Administration (NASA) as they must report their use of GUS on a categorical basis via a different reporting mechanism. The effectiveness of the NTTAA and Circular A-119 in encouraging an enhanced awareness and acceptance of private sector standards by federal agencies is demonstrated by the low numbers of reported new GUS used in lieu of VCS and the continuous review of opportunities to rescind GUS by using VCS. These activities suggest that federal agencies are cognizant of the benefits of meeting their mission needs by actively seeking to use standards developed by the private sector.

In accordance with its coordination role as defined in the NTTAA and OMB A-119, NIST continues to assist federal agencies and their stakeholders with standards and conformity assessment information, program support, guidance, and policy concerns. NIST hosts <http://standards.gov>, which offers ongoing practical guidance and information needed by agencies to implement the NTTAA successfully and report standards activities as required by the NTTAA and OMB Circular A-119. This report fulfills the annual reporting requirements of both the NTTAA and OMB Circular A-119.

## **Appendix A: FY 2018 Federal Agencies Reporting per OMB Circular A-119**

Access Board (ACCESS)  
Consumer Product Safety Commission (CPSC)  
Department of Agriculture (USDA)  
Department of Commerce (DOC)  
Department of Defense (DoD)\*  
Department of Energy (DOE)  
Department of Health and Human Services (HHS)  
Department of Homeland Security (DHS)  
Department of Housing and Urban Development (HUD)  
Department of the Interior (DOI)  
Department of Justice (DOJ)  
Department of Labor (DOL)  
Department of State (DOS)  
Department of Transportation (DOT)  
Department of Treasury (TRES)  
Environmental Protection Agency (EPA)  
Federal Communications Commission (FCC)  
Federal Trade Commission (FTC)  
General Services Administration (GSA)  
Government Publishing Office (GPO)  
National Aeronautics and Space Administration (NASA)\*  
National Archives and Records Administration (NARA)  
Nuclear Regulatory Commission (NRC)

\* Agencies reporting on a categorical basis per OMB Circular A-119, Section 11.

## **Appendix B: New GUS Used in Lieu of VCS for FY 2018**

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**Agency:** EPA  
**GUS:** EPA Method 15 – Determination of Hydrogen Sulfide, Carbonyl Sulfide, and Carbon Disulfide Emissions from Stationary Sources

**VCS:** ASTM D4323-84 (2009) – Standard Test Method for Hydrogen Sulfide in the Atmosphere by Rate of Change of Reflectance

**Rationale:** This standard is not acceptable as an alternative to EPA Method 15 since it only applies to concentrations of hydrogen sulfide from 1 nmol/mol to 3 nmol/mol without dilution, which is likely to be lower than the levels at source conditions. Also, many quality control items are missing in ASTM D4323, such as checks for calibration drift and sample line losses. The calibration curve is also determined with only one point, as opposed to a multi-point curve of EPA Method 15.

**Agency:** EPA  
**GUS:** EPA Method 24 – Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coating

**VCS:** ASTM D3960-05, ASTM D6053-14, ISO 11890-1 (2000), ISO 11890-2 (2000) Part 2, ISO 3233:1998

**Rationale:** ASTM D3960-05 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coating: This standard measures the VOC content whereas EPA Method 24 determines volatile matter content (and water content, density, volume solids, and weight solids). If the regulation allows for the use of VOC content as a surrogate for hazardous air pollutants, then this method is an acceptable alternative to Method 24. If the regulation requires the measurement of volatile matter content, as in Method 24, then this standard is not acceptable.

ASTM D6053-14 - Standard Test Method for Determination of Volatile Organic Compound (VOC) Content of Electrical Insulating Varnishes: Under a separate action, the EPA is incorporating ASTM D6053-96 by reference into EPA Method 24. This standard will only be applicable for a specific type of coating (electrical insulating varnishes). Specimen size for magnet wire coating must be 2.0 grams  $\pm$ 0.1 grams.

ISO 11890-1 (2000) Part 1: Paints and Varnishes Determination of Volatile Organic Compound (VOC) Content Difference Method: This standard has different test conditions than EPA Method 24 and therefore is unacceptable as an alternative to Method 24 because measured nonvolatile matter content can vary with experimental factors such as temperature, length of heating period,

size of weighing dish, and size of sample. ISO 11890-1 allows for different dish weights and sample sizes than the one size (58 mm in diameter and sample size of 0.5 g) of EPA Method 24. ISO 11890-1 also allows for different oven temperatures and heating times depending on the type of coating, whereas EPA Method 24 requires 60 minutes heating at 110° C at all times. Nonvolatile matter content is not an absolute quantity but is dependent on temperature and heating period. The size of the weighing dish and the size of the sample may also affect the nonvolatile matter measured. Because the EPA Method 24 test conditions and procedures define volatile matter, ISO 11890-1 is unacceptable as an alternative.

ISO 11890-2 (2000) Part 2: Paints and Varnishes-Determination of Volatile Organic Compound (VOC) Content Gas Chromatographic Method: This standard only measures the VOC added to the coating and would not measure any VOC generated from the curing of the coating. EPA Method 24 measures cure VOC, which can be significant in some cases, and, therefore, ISO 11890-2 is not an acceptable alternative to EPA Method 24.

ISO 3233:1998 - Paints and Varnishes - Determination of Percentage Volume of Nonvolatile Matter by Measuring the Density of a Dried Coating: This ISO standard is more applicable as a manufacturing tool than an emissions standard, since it measures the amount of coverage of a coating using a dipping plate.

**Agency:** EPA  
**GUS:** EPA Method 2C – Determination of Stack Gas Velocity and Volumetric Flow Rate in Small Stacks or Ducts (Standard Pitot Tube)  
**VCS:** ASTM D3154 – 00 (2014), Standard Method for Average Velocity in a Duct (Pitot Tube Method)  
**Rationale:** This standard appears to cover EPA’s Part 60 Methods 1, 2, 2C, 3, 3B, and 4, but lacks in quality control and quality assurance requirements. Specifically, ASTM D3154 – 00 does not include the following: 1) proof that openings of standard pitot tube have not plugged during the test; 2) if differential pressure gauges other than inclined manometers (e.g., magnehelic gauges) are used, their calibration must be checked after each test series; and 3) the frequency and validity range for calibration of the temperature sensors.

**Agency:** EPA  
**GUS:** EPA Method 3 – Gas Analysis for the Determination of Dry Molecular Weight  
**VCS:** ASTM D3154 – 00 (2014), Standard Method for Average Velocity in a Duct (Pitot Tube Method)



**Rationale:** This standard appears to cover EPA’s Part 60 Methods 1, 2, 2C, 3, 3B, and 4, but lacks in quality control and quality assurance requirements. Specifically, ASTM D3154 – 00 does not include the following: 1) proof that openings of standard pitot tube have not plugged during the test; 2) if differential pressure gauges other than inclined manometers (e.g., magnehelic gauges) are used, their calibration must be checked after each test series; and 3) the frequency and validity range for calibration of the temperature sensors.

**Agency:** EPA

**GUS:** EPA Method 301- Field Validation of Pollutant Measurement Methods from Various Waste Media

**VCS:** ASTM D4855-97 (2002) – Standard Practice for Comparing Test Methods

**Rationale:** This ASTM standard appears to be equivalent to EPA Method 301 in its statistical design and decision criteria but is less prescriptive than Method 301 for many procedures. For example, the ASTM standard does not require the use of a t-test explicitly to test the precision of the alternative method, but instead states that a t-test or F-test should be used, as appropriate. The primary difference between ASTM D4855-97 and EPA Method 301, which makes the ASTM standard not acceptable as a complete alternative to the EPA method, is that the ASTM standard addresses the testing of materials rather than environmental samples. Because of this difference, the ASTM standard does not prescribe the use of paired samples as in the EPA method. This feature of EPA Method 301 is critical to its success and the acceptability of an alternate standard.

**Agency:** EPA

**GUS:** EPA Method 3B – Gas Analysis for the Determination of Emission Rate Correction Factor for Excess Air

**VCS:** ASTM D3154 – 00 (2014), Standard Method for Average Velocity in a Duct (Pitot Tube Method)

**Rationale:** This standard appears to cover EPA’s Part 60 Methods 1, 2, 2C, 3, 3B, and 4, but lacks in quality control and quality assurance requirements. Specifically, ASTM D3154 – 00 does not include the following: 1) proof that openings of standard pitot tube have not plugged during the test; 2) if differential pressure gauges other than inclined manometers (e.g., magnehelic gauges) are used, their calibration must be checked after each test series; and 3) the frequency and validity range for calibration of the temperature sensors.

**Agency:** EPA

**GUS:** EPA Method 4 – Determination of Moisture Content in Stack Gas

**VCS:** ASTM D3154-00 (2014) Standard Method for Average Velocity in a Duct (Pitot Tube Method); ASME B133.9-1994 (2001) – Measurement of Exhaust Emissions from Stationary Gas Turbine Engines

**Rationale:** ASTM D3154-00 appears to cover EPA’s Part 60 Methods 1, 2, 2C, 3, 3B, and 4, but lacks in quality control and quality assurance requirements. Specifically, ASTM D3154-00 does not include the following: 1) proof that openings of standard pitot tube have not plugged during the test; 2) if differential pressure gauges other than inclined manometers (e.g., magnehelic gauges) are used, their calibration must be checked after each test series; and 3) the frequency and validity range for calibration of the temperature sensors.

ASME B133.9-1994 is not a quantitative method, per se, although it is a good primer for this source category that includes technical descriptions of manual and instrumental sampling procedures, as well as performance specifications for instrumental methods. This standard has many good references, including the EPA Methods and Performance Specifications. This standard is not a method, and is only for use in engines and turbines

**Agency:** EPA

**GUS:** EPA Method 6 - Determination of Sulfur Dioxide Emissions from Stationary Sources

**VCS:** ISO 7934:1998 (2016) – Stationary Source Emissions Determination of the Mass Concentration of Sulfur Dioxide – Hydrogen Peroxide/Barium Perchlorate/Thorin Method

ISO 11632:1998 (2016) – Stationary Source Emissions Determination of the Mass Concentration of Sulfur Dioxide – Ion Chromatography Method

**Rationale:** ISO 7934 is only applicable to sources with SO<sub>2</sub> concentrations of 30 mg/m<sup>3</sup> or more. Also, this standard does not separate SO<sub>3</sub> from SO<sub>2</sub> as does the EPA methods; therefore, ISO 7934 is not valid if more than a negligible amount of SO<sub>3</sub> is present. Also, it does not address ammonia interferences.

ISO 11632 sampling procedures are similar to EPA Method 6, but lacks in detail and quality control procedures, such as calibration checks and leaks tests.

## Appendix C: Rescinded GUS Used in Lieu of VCS for FY 2018

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<b>Agency:</b>	<b>DOT</b>
Year GUS Incorporated:	2016
GUS Rescinded:	49 CFR 571.304, Compressed natural gas fuel container integrity (1974)
VCS:	ANSI/CSA NGV2
<b>Agency:</b>	<b>EPA</b>
Year GUS Incorporated:	2001
GUS Rescinded:	EPA Method 25 – Gaseous Nonmethane Organic Emissions*
VCS:	EN 12619:1999 Stationary Source Emissions – Determination of the Mass Concentration of Total Gaseous Organic Carbon at Low Concentrations in Flue Gases – Continuous Flame Ionization Detector Method
<b>Agency:</b>	<b>EPA</b>
Year GUS Incorporated:	2001
GUS Rescinded:	EPA Method 25A – Gaseous Organic Concentration – Flame Ionization*
VCS:	EN 12619:1999 Stationary Source Emissions – Determination of the Mass Concentration of Total Gaseous Organic Carbon at Low Concentrations in Flue Gases–Continuous Flame Ionization Detector Method

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\* While both Methods 25 and 25A are still in use, EPA rescinded the two standards from the report as their use does not meet the reporting requirements of the NTTAA.

**Appendix D: FY 2018 Retroactive Additions of Previously Reported Government Unique Standards Used in Lieu of Voluntary Consensus Standards**

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**Agency:** DOT

**GUS:** 49 CFR 571.123, Motorcycle controls and displays (1977)  
[Incorporated: 1977, Reported 2016]

**VCS:** ISO 2575

**Rationale:** National Highway Traffic Safety Administration (NHTSA) first published this regulation on April 12, 1977. ISO 2575, “Road vehicles – Symbols for controls, indicators and tell-tales,” was published in 2004, and specifies symbols for use on vehicle controls and indicators. On November 26, 2014, NHTSA issued a notice of proposed rulemaking (NPRM) proposing to allow the use of an ISO 2575 warning label for automatic brake system (ABS) failure indication. NHTSA is considering whether to finalize this regulatory action.

**Agency:** DOT

**GUS:** 49 CFR 571.207, Seating Systems [Incorporated: 2005. Reported 2016]

**VCS:** Society of Automotive Engineers (SAE) J879, SAE J879B

**Rationale:** This regulation was published on April 8, 2005. Although not incorporated by reference, the test procedures and performance requirements are based on SAE J879, “Passenger Car Front Seat and Seat Adjuster,” published on November 1, 1963, and SAE J879B, “Motor Vehicle Seating Systems,” published on July 1, 1968. NHTSA is evaluating industry standards to inform the next steps of any revisions to its regulations.