Department of Homeland Security (DHS) Fiscal Year 2021 Agency Report

1.   Please provide a summary of your agency's activities undertaken to carry out the provisions of OMB Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities" and the National Technology Transfer and Advance Act (NTTAA). The summary should contain a link to the agency's standards-specific website(s) where information about your agency's standards and conformity assessment related activities are available.

The Department of Homeland Security (DHS) standards policy was established as part of the Homeland Security Act of 2002, incorporating the National Technology Transfer and Advancement Act of 1995 and the Office of Management and Budget Circular A-119. Implementation of the Circular was delegated to the Under Secretary for Science and Technology by the Secretary of Homeland Security.

A summary of DHS Components that were active in FY2021 in carrying out the provisions of OMB Circular A-119 include the Countering Weapons of Mass Destruction Office (CWMD), Federal Emergency Management Agency (FEMA), the U.S. Coast Guard (USCG), as well as the Science & Technology Directorate (S&T), which executes the duties of the Department's Standards Executive. For more information about DHS, see www.dhs.gov.

Specific Component-level responses are summarized below:

• In 2020, OMB Circular A-119 directs that "agencies must consult with voluntary consensus standards bodies in the development of standards when consultation and participation is in the public interest and is compatible with their missions, authorities, priorities, and budgetary resources." To this end, CWMD continued to sponsor and participate in the development and maintenance of American National Standard Institute (ANSI) voluntary consensus standards for radiation and nuclear detections systems used in homeland security. In 2020 CWMD sponsored the publication of a revision to ANSI N42.42 American National Standard Data Format for Radiation Detectors Used for Homeland Security and of amendments to ANSI N42.32 American National Standard Performance Criteria for Alarming Personal Radiation Detectors for Homeland Security and ANSI N42.34 American National Standard Performance Criteria for Handheld Instruments for the Detection and Identification of Radionuclides. As directed by the Safe Port Act of 2006, CWMD chaired the interagency Technical Capability Standard (TCS) Working Group to produce government-unique standards and completed the publication of a new Technical Capability Standard for Radiation Portal Monitor Systems with Energy Analysis Capability and a revision to the Technical Capability Standard for Handheld Instruments Used for the Detection and Identification of Radionuclides. The Standards Program established a CWMD webpage to provide open access to the DHS Technical Capability Standards for the general public. CWMD also participated with the U.S. Committee for International Electrotechnical Commission (IEC) international standards for radiation detection systems. In 2020 the IEC published: a new standard for Mobile Radiation Detection Systems, a revision to the standard for Spectroscopic Personal Radiation Detectors, and an amendment to the standard for Data Format.

• CWMD sponsored ANSI Series N42 standards for radiation detection for homeland security are available at: https://ieeexplore.ieee.org/browse/standards/get-program/page

• DHS Technical Capability Standards are available at: https//:www.dhs.gov/publication/technical-capability-standards-radiological-detection.

• FEMA provides subject matter experts to participate on design standards committees and the update cycles of the I-Codes. These standards include: ICC 500, Standard for the Design and Construction of Storm Shelters; ICC 600, Standard for Residential Construction in High Wind Regions; ASCE 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures; ASCE/SEI/AMS Wind Speed Estimation Standard; ASCE 24, Flood Resistant Design and Construction; ASCE/SEI 41, Seismic Evaluation and Retrofit of Existing Buildings; ICC 605, Standard for Residential Construction in Regions with Seismic Hazard; ASTM E3075, Standard Test Method for Water Immersion and Drying for Evaluation of Flood Damage Resistance; ASTM Flood Damage Resistance Rating of Materials and Assemblies; and ICC 1300, Standard for the Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings.

• The Coast Guard supports the provisions of OMB Circular A-119 and maintains one of the most robust standards programs in the Federal Government to meet our regulatory and research and development objectives. The Coast Guard remains committed to developing and adopting nationally and internationally recognized standards as a means to improve maritime safety, security, and marine environmental protection, and to promote the competitiveness of U.S. businesses in the global marketplace. Incorporating voluntary consensus standards helps the Coast Guard fulfill its regulatory functions more efficiently, develop the Government/industry partnerships crucial to stewardship, and gain valuable public feedback necessary for effective policy development. The Coast Guard aggressively supports a broad range of standards development organizations through funding, active engagement, and membership on numerous committees. This vigorous participation helps us raise and resolve genuine issues related to public safety, national security, and preservation of the marine environment with our industry partners.

The Coast Guard participates in the DHS Standards Council and the Interagency Council on Standards Policy. We also regularly collaborate with the National Institute for Standards and Technology Standards Directorate on training and conformity assessment issues. Visit our Director of Commercial Regulations & Standards website at http://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Prevention-Policy-CG-5P/Commercial-Regulations-standards-CG-5PS for further information.

• The DHS Science & Technology Directorate (S&T) delivers effective and innovative insight, methods, and solutions for the critical needs of the homeland security enterprise – working to meet the requirements of other DHS Components and DHS stakeholders. In 2020, S&T worked to expand the access to standards across the Department through increased collaboration with the DHS Library, as well as procuring a subscription to IHS for those in DHS in the National Capital Region. S&T is also developing a standards portal, Coordination and Access Portal for Standards (CAPS), which will greatly enhance the Department's standards access and collaboration capabilities. Additionally, S&T worked closely with NIST to develop a framework and toolkit of training modules, resources, and documents on standards development and conformity assessment, as it relates to the DHS mission and their standards needs. The toolkit will enable the DHS Standards Executive to tailor and execute a DHS standards training program specific to the operational needs of the various DHS components.

The Office of Science and Engineering (OSE) Biometrics and Identity Technology Center (BI-TC) also participates as a SME in the International Committee for Information Technology Standards (INCITS), specifically the (1) M1 Biometrics Committee and the (2) B10 Identification Cards and Related Devices

Committee. BI-TC also participates as a SME in the International Organization for Standardization (ISO), SC37 Biometrics Subcommittee.

• The DHS Intelligence Training Academy (ITA) designs, develops, assesses, and delivers homeland security intelligence training through a diverse set of training, education, and professional development programs for the Homeland Security Enterprise (HSE) and DHS Intelligence Enterprise (IE). Since inception, the ITA has delivered 901 training programs and trained 16,730 students across the HSE, IE, and Intelligence Community (IC). In FY2020, ITA renewed its accreditation to Federal Law Enforcement Training Accreditation (FLETA) standards.

• USCIS has developed and is implementing data standards in its technology systems, which are used to perform the mission. USCIS has 107 approved data standards, 20 of which are DHS-approved data standards. USCIS participates in the DHS Immigration Data Integration Initiative (IDII) to help promote consistent data standards across the department. USCIS standards are maintained locally and made available via Reference Data as a Service. In the next year, USCIS will manage data standards in Collibra in accordance with DHS.

• The Federal Law Enforcement Training Centers (FLETC) has reviewed OMB Circular A-119 and DHS Directive 078-04 and has determined that it is currently not involved in, nor actively participating with standards development organizations, to develop voluntary consensus standards. FLETC will continue to examine its programs to ensure compliance with DHS Directive 078-04.

• MGMT/OCHCO works within the bounds of, and is guided by, the Mission Support Management Directorate Data Management Committee (MSMD DMC) to identify need, define/identify a standard, and track implementation

• CBP/ES: The Agency does not have a standards-specific website. The following is the list of voluntary consensus standards in use by the HRM, Occupational Safety and Health Division. However, no employees of the HRM, Occupational Safety and Health Division are currently participating as board members in the development of these consensus standards:

    ANSI Z136.1 – Safe Use of Lasers
    ANSI Z136.6 – Safe Use of Lasers Outdoors
    ANSI/HPS N43.17-2009 - Radiation Safety for Personnel Security Screening Systems Using X-Ray or Gamma Radiation
    ANSI/HPS N43.3-2008 – Installations Using Non-Medical X-Ray and Sealed Gamma-Ray Sources, Energies Up to 10 MeV
    ANSI/HPS N43.5-2005 – Radiological Safety Standard for the Design of Radiographic and Radioscopic Non-Medical X-Ray Equipment Below 1 MeV
    ANSI/HPS N43.14-2011 - Radiation Safety for Active Interrogation Systems for Security Screening of Cargo, Energies Up to 100 MeV

    NCRP Report No.160, Ionizing Radiation Exposure of the Population of the United States.
    NCRP Report No. 116, Limitation of Exposure to Ionizing Radiation.
    NCRP Report No. 141 – Managing Potentially Radioactive Scrap Metal
    NCRP Report No. 147 – Structural Design for Medical X-Ray Imaging Facilities

NCRP Report 151 – Structural Shielding Design and Evaluation for Megavoltage X- and Gamma-Ray Radiotherapy Facilities

NCRP Commentary No. 16 – Screening of Humans for Security Purposes Using Ionizing Radiation Scanning Systems

NCRP Commentary No. 20 – Radiation Protection and Measurement Issues Related to Cargo Scanning with Accelerator-Produced High Energy X-Rays

NCRP Commentary No. 22 – Radiological Health Protection Issues Associated with Use of Active Detection Technology Systems for Detection of Radioactive Threat Materials

NCRP Commentary No. 21 – Radiation Protection in the Application of Active Detection Technologies

NCRP Commentary No. 18 – Biological Effects of Modulated Radiofrequency Fields

ICNIRP – Guidelines for Limiting Exposure to Electromagnetic Fields (100 kHz to 300 GHz)

International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines, 2020 for limiting exposure to electromagnetic fields (100 kHz to 300 GHz)

Federal Aviation Administration (FAA) Advisory Circular 70-1, Outdoor Laser Operations (2004)
FAA Order 7400.2, Procedures for Handling Airspace Matters (2012)

CBP/OS RESPONSE:
LSS utilizes consensus standards from the following organizations to ensure that the technical, electrical, and mechanical performance along with the safety of radiation detection, non-intrusive inspection (NII) systems and digital technology acquired and examined by the agency meet CBP requirements:

ANSI   American National Standards Institute
IEEE   Institute of Electrical and Electronics Engineers Standards Association
NFPA   National Fire Protection Association
ASTM   ASTM International (formerly American Society for Testing and Materials)
ASME   American Society of Mechanical Engineers
CFTT   National Institute of Standards (NIST) Computer Forensics Tool Testing Program
IACIS   International Association of Computer Forensic Examiners
SWGDE   Scientific Working Group on Digital Evidence
SANS   SANS Institute Best Practices

- TSA as a government component focused on developing capabilities (i.e. hardware, software and processes) that concentrates on safe-guarding aviation security, TSA/RCA drives standards in two distinct ways:

  - Voluntary Consensus Standards Development and
  - Performance Standard Development

  During the past fiscal year, TSA has actively engaged with an ANSI-accredited Standards Development Organization called NEMA (National Electrical Manufacturers Association). As described in the OMB Circular A-119, NEMA serves as the "Voluntary Consensus Standards Body", whom facilitates the development of the Digital Imaging and Communication in Security (DICOS)

standard for metadata (i.e. metadata and image format) associated with airport security images. These images result from security examination of a passenger, a passenger's checked bags, or a passenger's carry-on bags. TSA/RCA has appointed the Capability Development & Integration Branch to facilitate this engagement with NEMA to develop DICOS v3.0. Representative from this branch server on three (3) Technical Working Group Committees to help promote a "Voluntary Consensus Development" process that encourages efficiencies, expand opportunities for industry stakeholders, conserve resources, as well as, serves our agencies mission. As the version number implies, TSA has worked with NEMA for several years to evolve the DICOS standard from version 1 to version 2A (currently published: NEMA), to our current work with version 3.0.

TSA/RCA also develops **performance standards**, which specifies requirements in terms of <u>required results</u> with criteria for verifying compliance, but without stating the methods for achieving required results. These requirements are developed and packaged in a variety of ways, depending on their stage in the development cycle:

- CASP – Capability Analysis Study Plan
- CAR – Capability Analysis Report
- ORD – Operational Requirement Document
- FRD – Functional Requirements Document
- *This also includes our* Detection Requirements for Explosive material (to include Prohibited Items).

TSA/RCA performs a rigorous process of developing and refining these standard requirements, thru the "Voluntary Consensus Standard Body" referred to as the DHS Joint Requirements Council (JRC), to ensure the requirements support the government's desired interests. Through this process, representatives from the TSA/RCA Requirements Development Branch resolve objections through adjudication, where all comments have fair consideration. Once deliberated, and approved, the performance requirements migrate through a formal approval process via our senior leadership.

Lastly, TSA/RCA has long since recognized the high level of complexity and proprietary nature of our aviation security environment. The isolated configuration of our security systems has forced TSA to rely solely on a small group of industry technology providers. Over the past fiscal year, TSA/RCA has worked with National labs, and a matrix of industry stakeholders to execute multiple "conformity assessment activities" to promote standard communication between systems, standard data generation, standard image displays and overall open architecture development. The Checkpoint Automation (CPAM) initiative serves as a lead project to conduct requirements engineering, systems design, and Research and Development (R&D) to define and develop an integrated and open checkpoint screening architecture. CPAM has defined "Open Data" and "Standardization" as the key pillars of the CPAM initiative to guide open architecture initiatives and enable TSA to leverage Original Equipment Manufacturers' and 3rd-Party Vendors' in implementation of best-of-breed solutions. CPAM's continued work with industry leaders and small businesses to develop best-of-breed solutions has served as a "Voluntary Consensus Development Process" for developing performance standards (i.e. requirements) and standards for universal implementation.

- CISA:

The Cybersecurity and Infrastructure Security Agency (CISA) partners with standards organizations, consistent with CISA authorities, strategic intent, and DHS International Cybersecurity priorities, to drive policies and create standards to improve interoperability and automate cybersecurity operations, among other outcomes. CISA works with domestic and international partners and engages in standards development at the national and international levels. CISA participates in the following standards bodies: 3rd Generation Partnerships Project (3GPP), Institute of Electrical and Electronic Engineers (IEEE), International Telecommunication Union (ITU), Global Systems for Mobile Communication Alliance (GSMA), Internet Engineering Task Force (IETF), Alliance for Telecommunications Industry Standards (ATIS), WiFi Alliance, and OASIS Open. Within those bodies, CISA participates to monitor, support, and influence standards development activities relevant to agency mission objectives.

2. **Please list the government-unique standards (GUS) your agency began using in lieu of voluntary consensus standards during FY 2021. Please note that GUS which are still in effect from previous years should continue to be listed, thus the total number in your agency's report will include all GUS currently in use (previous years and new as of this FY):** 0