



MEMORANDUM FOR: David McGurk
Center Director
Petroleum, Natural Gas, and Minerals
Center of Excellence and Expertise

FROM: Dave Fluty
Executive Director
Laboratories and Scientific Services

SUBJECT: Natural Gas Units of Measurement

In response to your request on March 31, 2021, we are providing this memorandum on the units of measurement for natural gas quantity measurements used for Customs purposes. We note that natural gas is classified in Subheading 2711.21.00.00 of the Harmonized Tariff Schedule of the United States (HTSUS) and requires that, for CBP purposes, quantities of natural gas be reported in units for volume using cubic meters (m^3). You have indicated that entry information is routinely provided to U.S. Customs and Border Protection (CBP) using the heating value of the gas in units of million British thermal units (mmBTU), rather than cubic meters. This practice is neither consistent with the requirements for the reporting units in the HTSUS nor the standards in the American Petroleum Institute's (API) Manual of Petroleum Measurement Standards (MPMS). The API MPMS Chapter 14 for "Natural Gas Fluids Measurement" in Section 3 and the American Gas Association Report No. 3 specify industry standards for the volume measurement of natural gas (m^3) and describe the metering systems that are acceptable for custody transfer (e.g., orifice plate meter). These standards provide detailed calculations for performing volume measurements.

CBP evaluates and approves natural gas measurement systems for the determination of the custody transfer quantity of natural gas, whether liquefied or in the gaseous state, as part of the requirements for the measurement of petroleum and petroleum products. Meters are usually located on natural gas pipelines near their border crossing locations. We consider the exit flange at each of these meter stations to be the "border" for natural gas quantity determination and entry purposes. Meters used for custody transfer of petroleum for Customs purposes must be approved by the CBP Port Director with the concurrence of the Executive Director of Laboratories and Scientific Services and must be properly calibrated and maintained. The requirements for CBP approved meters are described in 19 CFR 151.42.

Natural gas measurement systems that meet or exceed the installation and performance criteria found in the most current version of the API MPMS and are operated in compliance with CBP Regulations are normally acceptable for CBP purposes. Therefore, CBP approved meters for natural gas are capable of providing a volume measurement. For all interactions with CBP

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including entry, industry should report these volume measurements in units of cubic meters whether the natural gas is admitted into the commerce of the U.S. or a foreign trade zone (FTZ). We note that natural gas measurement systems used by industry may calculate volume in units of cubic feet. In these cases, industry should refer to API MPMS Chapter 14, Section 3.3 Annex E, which provides a conversion table from cubic feet to cubic meters for common reference pressure and temperature conditions.