



Standard Practice for Passive Soil Gas Sampling in the Vadose Zone for Source Identification, Spatial Variability Assessment, Monitoring, and Vapor Intrusion Evaluations¹

This standard is issued under the fixed designation D7758; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 *Purpose*—This practice covers standardized techniques for passively collecting soil gas samples from the vadose zone and is to be used in conjunction with Guide [D5314](#).

1.2 *Objectives*—Objectives guiding the development of this practice are: (1) to synthesize and put in writing good commercial and customary practice for conducting passive soil gas sampling, (2) to ensure that the process for collecting and analyzing passive soil gas samples is practical and reasonable, and (3) to provide standard guidance for passive soil gas sampling performed in support of source identification, spatial variability/extent determinations, site assessment, site monitoring, and vapor intrusion investigations.

1.3 This practice does not address requirements of any federal, state, or local regulations or guidance or both with respect to soil gas sampling. Users are cautioned that federal, state, and local guidance may impose specific requirements that differ from those of this practice.

1.4 *Units*—The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This practice offers a set of instructions for performing one or more specific operations. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged,*

nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title means only that the document has been approved through the ASTM consensus process.

2. Referenced Documents

2.1 ASTM Standards:²

[D653 Terminology Relating to Soil, Rock, and Contained Fluids](#)

[D1356 Terminology Relating to Sampling and Analysis of Atmospheres](#)

[D2216 Test Methods for Laboratory Determination of Water \(Moisture\) Content of Soil and Rock by Mass](#)

[D2487 Practice for Classification of Soils for Engineering Purposes \(Unified Soil Classification System\)](#)

[D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction](#)

[D4597 Practice for Sampling Workplace Atmospheres to Collect Gases or Vapors with Solid Sorbent Diffusive Samplers](#)

[D5088 Practice for Decontamination of Field Equipment Used at Waste Sites](#)

[D5314 Guide for Soil Gas Monitoring in the Vadose Zone \(Withdrawn 2015\)³](#)

[D5792 Practice for Generation of Environmental Data Related to Waste Management Activities: Development of Data Quality Objectives](#)

[D6196 Practice for Choosing Sorbents, Sampling Parameters and Thermal Desorption Analytical Conditions for Monitoring Volatile Organic Chemicals in Air](#)

[D6311 Guide for Generation of Environmental Data Related to Waste Management Activities: Selection and Optimization of Sampling Design](#)

¹ This practice is under the jurisdiction of ASTM Committee [D18](#) on Soil and Rock and is the direct responsibility of Subcommittee [D18.21](#) on Groundwater and Vadose Zone Investigations.

Current edition approved Oct. 1, 2016. Published October 2016. Originally approved in 2011. Last previous edition approved in 2011 as D7758–11. DOI: 10.1520/D7758-11R16.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.