



Standard Guide for Collecting Treatment Process Design Data at a Contaminated Site—A Site Contaminated With Chemicals of Interest¹

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1. Scope

1.1 This guide lists the physical and chemical treatment processes design data needed to evaluate, select, and design treatment processes for remediation of contaminated sites. This data is listed in **Tables 1 and 2**. Much of these data can be obtained and analyzed at the site with instruments and test kits.

1.2 It is recommended that this guide be used in conducting environmental site assessments and Remedial Investigations/Feasibility Studies (RI/FS) and selections of remedy in U.S. Code of Federal Regulations 40 CFR 300.430.

1.3 *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.*

2. Referenced Documents

2.1 ASTM Standards:²

- D422 Test Method for Particle-Size Analysis of Soils
- D1067 Test Methods for Acidity or Alkalinity of Water
- D1293 Test Methods for pH of Water
- D1498 Test Method for Oxidation-Reduction Potential of Water
- D2216 Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- D2434 Test Method for Permeability of Granular Soils (Constant Head)
- D3590 Test Methods for Total Kjeldahl Nitrogen in Water

D3921 Test Method For Oil and Grease and Petroleum Hydrocarbons in Water (Withdrawn 2013)³

D4327 Test Method for Anions in Water by Suppressed Ion Chromatography

D4564 Test Method for Density and Unit Weight of Soil in Place by the Sleeve Method (Withdrawn 2013)³

D4611 Test Method for Specific Heat of Rock and Soil

D4943 Test Method for Shrinkage Factors of Soils by the Wax Method

D4972 Test Method for pH of Soils

D5084 Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter

D5334 Test Method for Determination of Thermal Conductivity of Soil and Soft Rock by Thermal Needle Probe Procedure

D5463 Guide for Use of Test Kits to Measure Inorganic Constituents in Water

D5730 Guide for Site Characterization for Environmental Purposes With Emphasis on Soil, Rock, the Vadose Zone and Groundwater (Withdrawn 2013)³

D6836 Test Methods for Determination of the Soil Water Characteristic Curve for Desorption Using Hanging Column, Pressure Extractor, Chilled Mirror Hygrometer, or Centrifuge

E953 Test Method for Fusibility of Refuse-Derived Fuel (RDF) Ash

2.2 Other Documents:

Remediation Technologies Screening Matrix and Reference Guide⁴

U.S. Code of Federal Regulations 40 CFR 300.430⁵

3. Terminology

3.1 Definitions:

3.1.1 *contaminants of concern, n*—any substance potentially hazardous to human health or the environment and present at the site and above background concentrations.

¹ This guide is under the jurisdiction of ASTM Committee D34 on Waste Management and is the direct responsibility of Subcommittee D34.01.01 on Planning for Sampling.

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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.

⁴ Available at <http://www.frtr.gov>

⁵ Available at <http://www.gpoaccess.gov/cfr/index.html>