

ASTM STANDARDS RELATED TO ENVIRONMENTAL SAMPLING



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Foreword

Traditionally, the quality of environmental data has been judged based on the analytical technique used to analyze environmental samples and not on the sampling technique used to collect the samples in the field. This is a very serious error. The location from which samples are collected, the methods used to collect them, and sample storage conditions during shipment to the laboratory are just as significant to the quality of environmental data as the analytical method that is used to analyze the samples once they are received in the laboratory.

For this reason, when performing environmental characterization, emphasis must be placed on preparing a thorough detailed sampling plan, selecting the most technically correct sampling methods and equipment for the characterization activity, and paying close attention to sample handling during shipment to the laboratory. This revised new edition of ASTM Standards on Environmental Sampling provides a valuable resource for these activities. This comprehensive volume is a compilation of the latest ASTM standards related to environmental sample collection and handling. In this publication are numerous standards on planning for sampling, screening samples in the field to indicate the need for additional sampling, interpreting data based on a specific sampling plan, as well as standards describing various sampling techniques for a variety of environmental media and providing valuable information on different types of sampling equipment for different environmental media. Information is also provided on sample holding times and preservation techniques for various sample types and analytes of interest, along with quality assurance/quality control (QA/QC) specifications to help ensure sample integrity.

ASTM offers another compilation of standards that complements this publication, ASTM Standards on Environmental Site Characterization. The cost of environmental site investigation and restoration is a very large domestic expenditure, and this publication should provide additional value and benefit to industry professionals involved in environmental site characterization and geophysics.

Susan Sorini

ASTM D34 Committee Chair

ASTM, founded in 1898, is a developer and publisher of technical information designed to promote the understanding and development of technology and to ensure the quality of commodities and services and safety of products. ASTM's primary mission is to develop voluntary full-consensus standards for materials, products, systems, and services. It provides a forum for producers, users, ultimate consumers, and those having a general interest (representatives of government and academia) to meet on common ground to write standards that best meet their goal. ASTM also publishes books containing reports on state-of-the-art testing techniques and their possible applications.

RELATED PUBLICATIONS

ASTM has issued several publications that may be of interest to the users of this compilation of standards. These are listed as follows:

Adjunct to E 1528 Environmental Site Assessment Transaction Screen Questionnaire (Stock# ADJE1528)

ASTM Standards on Assessment and Remediation of Petroleum Release Sites (Stock# REMEDIATE)

ASTM Standards on Environmental Assessment (CD-ROM and print versions) (Stock# ENVASSESS)

ASTM Standards on Environmental Site Assessments for Commercial Real Estate, 5th Edition (Stock# E50COMP06/Print; E50CMP06CD/CD)

ASTM Standards on Environmental Site Characterization, 3rd Edition (CD-ROM and print versions) (Stock# ENVSIT06/Print; SITECD06/CD)

ASTM Standards on Identifying, Defining, and Disclosing Environmental Liabilities (Stock# ENVLIAB02)

ASTM Standards Related to the Phase II Environmental Site Assessment Process, 2nd Edition (CD-ROM and print versions) (Stock# PHASE201/Print; PHASE201CD/CD)

DS 64B Cleanup Criteria for Contaminated Soil and Groundwater, 2nd Edition

E 1903 Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process

E 2091 Guide for Use of Activity and Use Limitations, Including Institutional and Engineering Controls

E 2247 Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property

Groundwater Natural Attenuation Calibration Tool Published by Groundwater Services, Inc.; distributed by ASTM (Stock# FATE5)

STP 1161 Leak Detection for Underground Storage Tanks

STP 1216 Environmental Toxicology and Risk Assessment, 2nd Volume

STP 1226 Lead in Paint, Soil and Dust: Health Risks, Exposure Studies, Control Measures, Measurement Methods, and Quality Assurance

STP 1333 Environmental Toxicology and Risk Assessment, 7th Volume

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- E 949 – 88(2004) Total Moisture in a Refuse-Derived Fuel Laboratory Sample
- E 775 – 87(2004) Total Sulfur in the Analysis Sample of Refuse-Derived Fuel
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- Practices for:*
- E 1076 – 85(2005) Maintaining Health and Safety Records at Solid Waste Processing Facilities
- E 1266 – 88(2005) Processing Mixtures of Lime, Fly Ash, and Heavy Metal Wastes in Structural Fills and Other Construction Applications
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- D 6346 – 98(2004) Accepting, Segregating and Packaging Materials Collected Through Household Hazardous Waste Programs
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