



# Standard Guide for Environmental Management of Underground Storage Tank Systems Storing Hazardous Substances or Petroleum<sup>1</sup>

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## INTRODUCTION

This guide provides an overview of environmental practices for design, installation, operation and maintenance, and corrective action for underground tank systems used for storage of hazardous substances and petroleum products. The training and application of these practices should serve to prevent accidental releases of petroleum or hazardous substances from underground storage tank systems and to facilitate effective detection and response when and if such releases do occur. The guide is intended for use by tank system owners and operators and other persons concerned with practices for prevention and control of environmental releases and remediation of affected environmental media. The guide provides an overview of environmentally sound management practices, identifying key management considerations and referring the user to other related ASTM standards and industry guidelines for more detailed information. All personal safety considerations are not addressed in this guide, and it is the responsibility of the user to identify relevant safety and health protection practices and regulations related to tank system management. Caution is warranted due to the flammable or combustible property of some materials stored in underground storage tanks. Fire codes should be followed.

## 1. Scope

1.1 The framework discussed in this guide is limited to facilities with underground storage tanks (USTs) storing hazardous substances or petroleum at ambient temperature and atmospheric pressure. This guide is not intended to provide detailed technical specifications for implementation of the approaches described in this document, nor to be used as an enforcement tool, but rather to identify the important information used for environmental management of underground tank systems. The term “must” is used where United States federal requirements apply. References to ASTM standards and other industry guidelines have been provided to address implementation of the approaches discussed in this guide. Many states and some local agencies have adopted UST rules that place additional responsibilities on the owners/operators of UST systems. Refer to state and local regulations that may contain

additional requirements. It is not possible to identify all considerations or combinations of conditions pertinent to a unique underground storage tank system.

1.2 This guide addresses principal considerations related to the prevention and response for environmental releases from tank systems and is organized in the sections listed below:

|                   |                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Section 1:        | Scope                                                                                                                                                |
| Section 2:        | Lists relevant ASTM Standards and other industry or regulatory guidance documents                                                                    |
| Section 3:        | Defines the key terminology used in this guide                                                                                                       |
| Section 4:        | Describes the significance and use of this guide                                                                                                     |
| Section 5:        | Tank System Design and Installation                                                                                                                  |
| Section 6:        | Preventive Maintenance and Inspection Plan                                                                                                           |
| Section 7:        | Fueling Procedure                                                                                                                                    |
| Section 8:        | Corrective Action for Affected Environmental Media                                                                                                   |
| Section 9:        | Tank System Closure                                                                                                                                  |
| Section 10:       | Tank Management Practice Education and Training                                                                                                      |
| Appendix X1:      | Recurring Release Detection and Cathodic Protection Requirements (Quick Glance) is intended to be a quick reference guide for monitoring information |
| Related Material: | Documents related to environmental management of underground storage tanks                                                                           |

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action and is the direct responsibility of Subcommittee E50.01 on Storage Tanks.

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