

Installation of Underground Petroleum Storage Systems

API RECOMMENDED PRACTICE 1615
SIXTH EDITION, APRIL 2011

REAFFIRMED, MAY 2020



AMERICAN PETROLEUM INSTITUTE

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Marketing Segment

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Contents

	Page
1	Scope 1
2	Definitions and Acronyms 1
3	Referenced Publications. 13
3.1	Informative References. 13
3.2	Other Laws and Regulations 17
4	Safety and Health. 17
4.1	General 17
4.2	Contractor Work Safety 17
4.3	Emergency Response. 19
5	Materials and Equipment 19
5.1	General 19
5.2	Federal Requirements. 19
5.3	Material Specifications 20
5.4	Total Cost of Ownership (TCO) 20
6	Preconstruction and Preinstallation Site Analysis 21
6.1	General 21
6.2	Secondary Containment 21
7	Removal and Disposal of Used Storage Systems 21
7.1	Safety Considerations. 21
7.2	Considerations for Partial System Removal 22
7.3	Contaminated Backfill. 23
7.4	Disposal of Used Equipment 23
8	Excavation 23
8.1	General 23
8.2	Safety Considerations. 23
8.3	Location of Tanks 23
8.4	Excavation Dimensions 25
9	Handling, Inspection and Testing 27
9.1	Material Handling. 27
9.2	Pre-installation Inspection and Testing 28
9.3	Testing—General. 30
9.4	Safety Precautions 30
9.5	Pressure Testing of Single-wall Tanks 30
9.6	Pressure Testing of Double-Wall Tanks 32
9.7	Testing of Piping and Sumps 33
10	Equipment Placement, Anchorage, Secondary Containment, and Ballasting. 33
10.1	Placement. 33
10.2	Tank Buoyancy 34
10.3	Anchorage 35
10.4	Ballasting 37
11	Backfilling. 38
11.1	General 38
11.2	Pipe Tightness Test 38
11.3	Placement of Materials and Compaction of Backfill 38

Contents

	Page
11.4 Covering	39
11.5 Grading and Paving.	40
11.6 Post-backfill Inspection of FRP Tanks	40
12 Pumping Systems Design	40
12.1 General	40
12.2 Pressure Pumping Systems.	41
12.3 Suction Pumping Systems	41
12.4 Other Factors	41
12.5 Tank Fittings.	42
12.6 Identification of Driveway Manways	42
13 Piping	43
13.1 General	43
13.2 Layout and Design	43
13.3 Vent Piping	45
13.4 Fiberglass-Reinforced Plastic (FRP) Piping.	48
13.5 Steel Piping	48
13.6 Flexible and Semi-flexible Plastic Piping	49
13.7 Pipe Connections	49
13.8 Pipe Tightness Testing	50
14 Overfill Protection and Spill Containment	50
15 Corrosion Protection.	55
15.1 General	55
15.2 Sacrificial Anode System	56
15.3 Testing	57
16 Electrical.	57
16.1 General	57
16.2 Equipment Selection.	57
16.3 Emergency Disconnects.	57
16.4 Intrinsically Safe	58
16.5 Connections.	58
17 Vapor Recovery	58
17.1 General	58
17.2 Stage I Vapor Recovery.	59
17.3 Stage II Vapor Recovery	60
17.4 Equipment	60
17.5 System Design.	61
18 Detection of Releases	61
18.1 General	61
18.2 Federal Requirements—General	61
18.3 Leak Detection Methods—Requirements	61
18.4 Leak Detection Certification.	67
18.5 Technical Considerations	67
19 Final Testing.	67

Contents

Page

Annex A (informative) UST System Installation Documents Checklist	69
Annex B (informative) Sample Buoyancy Calculation	70
Annex C (informative) Optional UST System Checklist	72

Figures

1 Sample UST System—Secondary Containment	22
2 Tank Excavation Clearance from Existing Structures	24
3A Example of Shoring System for Unstable Soil Conditions	24
3B Example of Pre-engineered Shoring System for Unstable Soil Conditions	25
4 Typical Plot Plan Showing Typical Tank Placements	26
5 Proper Rigging for Lifting and Lowering Tanks	27
6 Typical “Holiday” Test for Steel USTs	29
7 Typical Pressure/Soap Test for FRP USTs	29
8 Pressure Test Gauge Setup for Single-wall Tanks	31
9 Pressure Test Gauge Setup for Double-wall Tanks	32
10 Backhoe Boom Swing Radius Exclusion Zone	34
11 Proper Tank Alignment	35
12 Typical Anchorage for Underground Storage Tanks	36
13 Typical Anchorage for Underground Storage Tanks	37
14 Piping Backfill and Burial Details	39
15 Depth of Covering Over Tanks and Excavation	40
16 Typical Piping Configurations	44
17 Piping Slope Details	45
18 Piping Manifold Configurations	46
19 Typical Vent Piping Details	47
20 Typical Piping Tightness Test Gauge Setup	51
21A Typical Spill Containment Device	52
21B Typical Overfill Spill Containment Detail with Secondary Containment	53
22 Typical Flapper Valve	54
23 Stray Current Corrosion	56
24 Sacrificial Anode Cathodic Protection	56
25 Typical Vapor Recovery System	58
26 Typical Leak Detector or Pressure Transducer	63
27 Example of a Functional Test Apparatus for Mechanical Line Leak Detectors	64
28 Typical Interstitial Monitoring Systems (Tanks, Piping, and Sumps)	65
29 Typical Observation Well Used Within the Tank Excavation	66
B.1 Buoyancy Calculation—15,000 Gallon Tank	71

Introduction

The proper installation of an UST system can contribute toward ensuring that the maximum utilization of the various components and equipment comprising an UST system are achieved at the lowest total cost of ownership. This will help prevent, as well as reduce, the frequency and magnitude of releases that may result from equipment failure or malfunction.

The benefits from proper installation include, but are not limited to, improved protection of the environment and reduced environmental liabilities for the UST system owner and operator.

Construction plans and written documents are often required for obtaining permits, soliciting bids, and providing precise guidance for installers. Obtaining and providing the following documentation is the responsibility of various stakeholders (e.g. general contractors, electrical contractors, equipment manufacturers, environmental assessment contractors, regulatory agencies, etc.). Those responsibilities can be designated during initial construction planning meetings with the UST owner and operator. (See also Annex A—"UST System Installation Documents Checklist")

The choice of proper equipment and materials is necessary to help provide long-term system operation and integrity. Installation checklists tailored to the intended installation site provide a convenient method for planning and documenting work. Any municipal, county, or state codes and regulations, as well as nationally-recognized industry standards or recommended practices that address the installation of the UST system should also be referenced and/or included in the document package. Any other requirements specific to local conditions that may provide information regarding safety and/or environmental considerations during construction should also be included. (See also Annex A—"UST System Installation Checklist" of items discussed in this Introduction)

Installation of Underground Petroleum Storage Systems

1 Scope

1.1 This Recommended Practice (RP) is a guide to procedures and equipment that should be used for the proper installation of underground storage systems for bulk petroleum products or used oil at retail and commercial facilities. The stored products include gasoline, diesel fuel, kerosene, lubricating oils, used oil, and certain bio-fuel blends. (For information on alcohol/gasoline blends, see API 1626. The product manufacturer and the authority having jurisdiction (AHJ) should be consulted with regard to the proper storage of all products.)

NOTE All drawings provided in this document are for reference and illustration purposes only. Drawings are not to scale and may not reflect exact details of UST system configurations, components and equipment provided by manufacturers. For exact specifications and details of components and equipment consult the manufacturer(s).

1.2 This RP is intended for use by architects, engineers, tank owners, tank operators, and contractors. Contractors, engineers, and owners or operators who are preparing to design or install an UST system should investigate the federal, state, and local requirements and current methods of compliance for vapor recovery in that region. Vapor recovery is covered in detail in Section 17 of this document. For more information on the design and installation of vapor recovery systems, see NFPA 30A, and PEI RP 300

NOTE An AHJ may reference different codes.

1.3 This RP is not intended to cover specialized installations, such as fuel storage systems at marinas or airports, heating oil storage systems (either residential or bulk), or systems installed inside buildings. However, it does outline recognized and generally accepted good engineering practices which may be of use for these specialized installations. This RP does not apply to the installation of below ground or above ground bulk storage systems greater than 60,000 gal. The reader is referred to the following standards for information on specialized storage systems:

- a) marinas: NFPA 30A and PEI RP 1000;
- b) residential storage of heating oil: NFPA 31;
- c) storage inside buildings: NFPA 30;
- d) bulk storage—general: PEI RP 800;
- e) aboveground storage: NFPA 30, NFPA 30A, API 650, API 651, API 652, API 653, API 2601, and PEI RP 200.

NOTE An AHJ may reference different codes.

1.4 This RP shall not preempt any federal, state, or local laws and regulations; specifically, those referenced in 3.2.

2 Definitions and Acronyms

For the purposes of this document, the following definitions and acronyms apply:

2.1

ACGIH

American Conference of Governmental Industrial Hygienists

2.2

anode

The positive electrode from which electrons leave a device and corrosion occurs.