Overfill Prevention for Storage Tanks in Petroleum Facilities

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Shall: As used in a standard, “shall” denotes a minimum requirement in order to conform to the standard.

Should: As used in a standard, “should” denotes a recommendation or that which is advised but not required in order to conform to the standard.

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Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, Suite 1100, Washington, DC 20001, standards@api.org.

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Overfill Prevention for Atmospheric Storage Tanks in Petroleum Facilities

1 Scope

1.1 Scope

This document applies to atmospheric storage tanks associated with refining, marketing, pipeline, and terminals that contain NFPA Class I or Class II liquids. This standard does not apply to:

— tanks of 1320 US gallons (5000 liters) or less, unless connected to a transporter or marine delivery system;

— tanks that are covered by PEI RP 600;

— tanks filled exclusively from wheeled vehicles (i.e. tank trucks or railroad tank cars), where the fill rate is less than 630 bbl/hr (440 gpm) (100m^3/hour);

— dedicated pipeline relief tanks; and

— tanks storing LPG and LNG.

The purpose of this standard is to assist owner/operators and operating personnel in the prevention of tank overfilling by implementation of a comprehensive overfill prevention system (OPS). The goal is to receive product into the intended storage tank without overfilling or mechanical damage.

1.2 Minimum Requirements

This standard is one of minimum requirements. Alternate approaches or variations on the principles of this standard that provide equivalent or more robust overfill prevention are acceptable. Alternate approaches may be needed when the tank system varies from the typical configurations described in this standard. The rationale for the implementation of each overfill prevention process (OPP) should be documented and retained by the owner/operator. This standard is not intended to prevent the use of systems, methods, or devices of equivalent or superior quality, effectiveness, durability, and safety over those provided in this standard. Where the rules in API 2350 conflict with local, state, or federal regulations, the regulations shall take precedence over API 2350. In the event that there are conflicts, the more stringent of API 2350 or the regulations shall be applied.

2 Normative References

The following referenced documents are necessary for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API *MPMS* Chapter 3.1A, *Standard Practice for the Manual Gauging of Petroleum and Petroleum Products*

API *MPMS* Chapter 3.1B, *Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging*

IEC 61511[1], *Functional Safety – Safety instrumented systems for the process industry sector – Part 1: Framework definitions, system, hardware, and software requirements* (This document is only classified as normative when chosen as an option by the owner/operator.)

Other references in the document, including those in the Bibliography, are provided for information only and are not normative to this standard.

[1] International Electrotechnical Commission, 3 rue de Varembe, PO Box 131, CH-1211 Geneva 20 Switzerland, www.iec.ch.