

# What is a Formal Aboveground Storage Tank Inspection?

*In addition to regulatory risk, failure to comply with inspection requirements may lead to expensive releases and unnecessary remediation costs.*

Owners/operators of petroleum-containing aboveground storage tanks (ASTs) may be subject to the Spill Prevention, Control and Countermeasures (SPCC) rule. This rule, which is administered by the United States Environmental Protection Agency (USEPA) per 40 CFR §112, regulates facilities that have more than 1,320 gallons of total oil storage capacity.

A key component of the SPCC rule is inspection and integrity testing of ASTs per an applicable industry standard. One such standard, the Steel Tank Institute (STI) SP001, focuses primarily on ASTs with capacity less than or equal to 50,000 gallons (189,271 liters). In certain cases, this standard requires a *formal inspection* of ASTs. For SPCC-regulated facilities, the formal inspection requirements should be set forth in the facility's SPCC plan. It is critical that these inspections be performed as specified in the applicable industry standards. In addition to regulatory risk, failure to comply with inspection requirements may lead to expensive releases and unnecessary remediation costs.

## AREA OF CONCERN

*What is a formal inspection? Who may perform a formal inspection? When is a formal inspection required?* It is critically important that the answers to these questions are fully understood by tank owners/operators to ensure they are in compliance with the SPCC rule. Being fully cognizant of compliance rules may save the tank owner the significant expense of a spill cleanup.

## CONSIDERATIONS

### What is a formal inspection?

The purpose of the formal inspection is to determine the tank's suitability for continued service, which is intended to meet the US EPA's **integrity testing requirement**. The formal tank inspection, which must be performed by a certified inspector, is intended to determine if the tank is fit for continued use or if it needs to be removed from service. There are three types of formal inspections, which STI SP001 defines as follows:

1. **External inspection** - a documented inspection that is conducted by a certified inspector to assess the condition of the AST and determine its suitability for continued service without entry into the AST interior.
2. **Internal inspection** - a documented inspection that is conducted by a certified inspector to assess the internal **and** external condition of the AST and determine its suitability for continued service. A formal internal inspection satisfies the requirements of a formal external inspection and shall be considered equivalent to, or better than, a formal external inspection for the purposes of scheduling.

*In assessing the tanks' suitability for continued service, the tank inspector provides credibility and assumes professional liability for the compliant operation of the AST.*

3. **Leak test** - a “point in time” test to determine if an AST is liquid tight. It may be used as a tank integrity measure or as a supplement to other inspection procedures.

**Who may perform a formal inspection?**

The formal inspection is performed by a certified tank inspector who has met the requirements for certification from an accredited body such as STI. Certification normally requires three components: 1) experience, 2) training and 3) proficiency. In assessing the tanks' suitability for continued service, the tank inspector provides credibility and assumes professional liability for the compliant operation of the AST.

**When is a formal inspection required?**

Formal inspections for shop-built ASTs with a capacity of 50,000 gallons or less are required by the STI in the *Standard for the Inspection of Aboveground Storage Tanks*, SP001. The requirement for formal inspection is a function of three variables:

1. Tank capacity
2. Presence of spill control, which is defined as a means of preventing a release of liquid to the environment
3. Presence of a continuous release detection method that allows the facility to monitor the tank for release

**Table 1: Formal Inspection Requirements for Shop-Built ASTs (≤ 50,000 gallons)**

Type <sup>1</sup>	Capacity (gallons)	Spill Control	CRDM	Formal External Inspection	Formal Internal Inspection	Leak Test
Shop-fabricated, any capacity or unknown construction and capacity < 50,000 gallons	0 – 1,100	Yes	Yes	NR <sup>2</sup>	NR	NR
	1,101 – 5,000			NR	NR	NR
	5,001 – 30,000			20 Years	NR	NR
	30,001 – 50,000			20 Years	NR	NR
	0 – 1,100	Yes	No	NR	NR	NR
	1,101 – 5,000			10 Years	NR	10 Years
	5,001 – 30,000			10 Years	20 Years or	NR
				5 Years	NR	10 Years
	30,001 – 50,000			5 Years	15 Years	5 Years
	0 – 1,100			No	No	10 Years
	1,101 – 5,000	5 Years	10 Years or			5 Years
		5 Years	NR			2 Years
5,001 – 30,000	5 Years	10 Years or	5 Years			
	5 Years	NR	1 Year			
30,001 – 50,000	5 Years	10 Years	5 Years			

Source: Adapted from Chapter 5, STI SP001

<sup>1</sup> STI SP001 only applies to atmospheric tanks containing liquids with a specific gravity less than 1.0

<sup>2</sup> NR = not required

## STRATEGY

The above inspection intervals should be set forth in the facility's SPCC plan.

A responsible party at the facility should contract with a certified inspector to perform the necessary inspection. Inspection reports should be provided to the facility and should be maintained on file for review at the facility for the life of the AST.

If the tank is not suitable for continued service, the facility should use technical resources (certified inspector and/or a registered professional engineer) to evaluate AT modification or system/process alteration options. These options may include:

- **Change in service** - the facility may be able to continue to use the tank in another capacity
- **Repair** - the facility may be able to repair the tank so it can be returned to service
- **Replacement** - if repairs are not warranted and there is no potential for other suitable use, the facility may have to replace the tank

## SUMMARY

The SPCC rule requires that AST owners implement an inspection regimen for their tank(s). In some cases, this includes formal inspections which must be performed by a certified tank inspector. The tank owner/operator must fully understand these requirements, which are regulatory in nature. Due to its preventive nature, an effective inspection program should identify potential AST failure issues, which will save the tank owner/operator significant cost and reduce regulatory issues.

Please contact us at 800-805-6002, and a Sierra Piedmont team member will be happy to assist you with your specific project.