



Periodic and Formal AST Inspection Worksheet

STI SP001 - Spill control, CRDM, and RPB

Spill control

- Properly designed, installed, and maintained remote impounding;
- Properly designed, installed, and maintained diking; or
- Secondary containment (double-wall) ASTs meeting **all** of the following criteria.
 - Capacity does not exceed 12,000 gals for Class I or 20,000 gals for Class II or IIIA liquids.
 - All tank piping connections are made above the maximum liquid level.
 - Means provided to prevent the release of liquid from the tank by siphon flow.
 - Means provided for determining the level of liquid in the tank, which is accessible to the delivery operator.
 - Be equipped with overflow protection equipment (95% automatic shutoff or 90% audible alarm that can be heard by the delivery operator)
 - Be equipped with spill prevention equipment at the tank fill connections.
 - Be protected from collisions.

CRDM (Continuous release detection method)

- Double-wall or double-bottom ASTs that can be monitored for releases using manual, mechanical or electronic methods (e.g., UL 142 double-wall ASTs, UL 2085 ASTs, etc.);
- Elevated ASTs where the shell of the tank is not in contact with earthen materials and is able to be visually inspected for leaks on all sides (e.g., single-wall UL 142 skid tanks, horizontal tanks on concrete saddles, etc.);
- STI SP001, 5th Edition does not require RPB under an elevated AST as in previous editions; or
- Release prevention barriers (**RPB**) installed under the AST that are capable of diverting leaks to a point where they can be easily detected (such as along the perimeter of the tank, or a sump), and capable of preventing liquid from contaminating the environment. RPBs must be compatible with the liquid being stored, meet proper engineering standards, and be maintained in good condition so as to be liquid-tight across their surface (e.g., steel, concrete and elastomeric liners).

Requirements for Release Prevention Barriers (RPBs)

For existing materials to be considered RPBs, the following criteria must be met.

Concrete

- Concrete pads/slabs must be constructed of 6 inch minimum reinforced concrete (or approved and stamped as sufficient by a professional engineer) that has been poured monolithically, and without expansion joints
- The pad/slab must extend beyond the perimeter of the tank by 6 inches minimum for its entire perimeter to allow for visual inspection
- The concrete must be undamaged and in good condition (no cracks, spalling, etc).

Liners and other approved suitable materials (including elastomeric, geosynthetic clay, etc)

- Must meet appropriate engineering standards, be compatible with the liquid stored, and have a permeability rate of 1×10^{-7} cm/sec or less to the liquid stored
- The material must extend beyond the perimeter of the tank by 6 inches minimum for its entire perimeter to allow for visual inspection
- The material must be undamaged and in good condition (no cracks, rips, tears, broken seams, etc.).

Table 1: STI SP001 Inspection Frequency

Tank Capacity (gal)	Category 1	Category 2	Category 3
660 - 1,100	M A	M A	M A E(10) L(10)
1,101 – 5,000	M A	M A E(10) L(10)	M A E(5) L(5) I(10) or M A L(2) E(5)
5,001 – 30,000	M A E(20)	M A E(10) I(20) or M A E(5) L(10)	M A E(5) L(5) I(10) or M A L(1) E(5)
30,001 – 39,999	M A E(20)	M A E(5) L(5) I(15)	M A E(5) L(5) I(10)

M = Monthly inspection

E = Formal External Inspection (years)

L = Leak Test (years)

A = Annual Inspection

I = Formal Internal Inspection (years)

