

SP001 7th Edition Updates to STI's Inspection Checklists

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SP001 Checklist Subcommittee

As part of the 7th Edition, the SP001 Monthly, Annual and Portable Inspection Checklists were reviewed by a subcommittee comprised of fabricators, tank inspectors, tank owners, Federal and State regulators, and STI staff

Since the SP001 Standard is mature, only a relatively small number of changes were needed, primarily for clarification and refinement of the questions

Checklist Version	Monthly Checklist Questions	Annual Checklist Questions	Portable Checklist Questions
Jan 2018 6 th Edition (Old)	18	25	6
Feb 2024 7 th Edition (New)	19	25	6

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Key Considerations with Inspection Checklist Subcommittee

1. The SP001 checklists (monthly and annual) are now used nationwide, so one goal was to make sure the content reflected the diversity of tanks, from small day tanks to qualified field erected tanks, in many different applications.
2. Because the US uses two model fire codes (NFPA and IFC), a goal was to the content should be broad enough to capture both, not just one or the other
3. The main driver for SP001 checklists is the SPCC program, primarily for compliance with the provisions of 40CFR112.8(c)(6)—the requirements for bulk storage containers. Other requirements in the SPCC program (such as inspections for oil filled operating equipment) exist, and need to be addressed elsewhere in SPCC plans. Bulk storage containers (tanks, drums, totes, etc.) are the main focus of the SP001 Standard.

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Key Considerations with Inspection Checklist Subcommittee

4. Checklist Audience: It was recognized that the inspection checklists are used by owner's inspectors who may not be familiar with the content of the entire SP001 Standard. Keeping the language in the checklists simple and user friendly is beneficial.
5. Based on comments from regulatory agency staff, one concern was owners removing checklist content without documenting why. Trying to identify or highlight critical items to check was considered important.
6. Although not technically part of the inspection checklists, the importance of the AST Record was also discussed by the broader SP001 Committee. The AST Record provides written documentation of the tank features, including construction date, type of construction, tank category and others, and is an owner requirement. The AST Record is now a free document provided along with the checklists by STI, to encourage the use of this for tank owners and SPCC Plan writers.

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Universal Inspection Checklist Updates

- Added clarifying language to limit checklist content edits-in Monthly, Annual and Portable Checklists

“This checklist is intended as a model. Locally developed checklists are acceptable as long as they are equivalent [and meet all applicable inspection checklist items](#). Inspections of multiple tanks may be captured on one form as long as the tanks are substantially the same.”

This change was made to ensure that owners/Plan writers did not remove applicable items without justification.

Note that removal of applicable items from checklist would require a PE to prepare Environmental Equivalence

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Universal Inspection Checklist Updates

- Returned the non-conforming status asterisk on the inspection checklist

NEW * [designates an item in a non-conformance status. This indicates that action is required to address a problem.](#) Note that some non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section

This change was made to emphasize that actions are required when nonconforming conditions are encountered. The 6th Edition had removed this from the checklist, but has since been returned in order to emphasize the need for corrective actions by owners.

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Monthly Inspection Checklist Updates

- Changes in Spill Control and/or CRDM can affect Tank Category

NEW: If the inspection finds the integrity of the spill control system and/or the CRDM, such as items 13 and 14, is compromised the tank category and inspection time table should be re-evaluated by someone knowledgeable about the SP001 standard.

This change was made to recognize that deterioration or damage to spill containment or release detection methods can affect the tank category.

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Monthly Inspection Checklist Updates

NEW: Is tank shell or supports free of soil, vegetation, water, or foreign material collected or covering the grade line (tank chime or bottom projection)?

This change was made to recognize that tank damage can occur (particularly corrosion) due to the presence of soil, vegetation, standing water and foreign materials at the grade line (the intersection of the tank bottom and surrounding grade). This is sometimes called “soil stacking”.

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Damage from "Soil Stacking"



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Tank Damage from Allowing Water to Collect near Supports and Grade Line



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Annual Inspection Checklist Updates

- Similar changes in introductory material as Monthly
- Revised/expanded sections to better align with content
- Removed question relevant only to gasoline tanks ~~“Normal vent on tanks storing gasoline equipped with pressure/vacuum vent?”~~ Why?
 - 1. Limited applicability to tank universe under broad standard
 - 2. P/V vent has limited linkage to tank integrity
 - 3. Some small gasoline tanks not required to have P/V vent (but they should have one, saves product from evaporating)
 - 4. Really an air quality compliance issue

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Annual Inspection Checklist Updates

- Revised/expanded sections to better align with content
- Removed section that had two dedicated questions for Tank/Piping Release Detection—these were new in 6th edition, not in prior years
- One dropped completely: ~~Is inventory control being performed and documented if required?~~
- Why: Limited applicability: No widespread regulatory requirement for inventory control as means of leak detection, except in NFPA 30A (Fuel Dispensing Facilities and Repair Garages); no known requirement in IFC except for USTs (*2306.2.1.1 Inventory Control for underground tanks*)

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Annual Inspection Checklist Updates

- Tank/Piping Release Detection—these were new in 6th edition, not in prior years
- **OLD:** ~~Is release detection being performed and documented in required?~~
- **NEW:** Moved to Tank Manways and Piping Subsection and refocused language
- Is leak or release detection on underground piping being performed and documented if required?
- Why: Question refocused to address leak/release detection requirements found in certain State programs, some of which mirror UST requirements.
- Potentially covers some installations where leak detection systems, such as LLDs, are installed, consistent with IFC 2306.7.7.1 *Leak Detection*.
- For CA, might also cover some TIUGAs (CFC 5703.6.2.2 *Below-grade or underground piping systems connected to a tank in an underground area*)

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Annual Inspection Checklist Updates

- Tank Manways and Piping Subsection: Added questions to expand scope of subheading and refocused language
- **OLD:** ~~Flanged connection bolts tight and fully engaged with~~
- ~~no sign of wear or corrosion? (this was the only question in the old subsection)~~
- **NEW:** Are piping system joints, manway covers, gaskets, and attachment bolts tight and in good condition with no sign of wear, damage, leaks or corrosion?
- Why: Revised to expand section beyond flanged connections, as not all tanks use flanged connections; more explicitly addressed manway covers; refined question to include damage and leaks
- **NEW:** Are piping supports in good condition and free of corrosion and damage?
- Added question about piping supports, not previously covered. These are locations where corrosion can be significant; tanks with failing piping supports can induce further stress on tank in some cases

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Annual Inspection Checklist Updates

- Tank Equipment Subsection: Mostly minor changes...
- **OLD:** Flame Arrestors: ~~Are flame arrestors free of corrosion and are air passages free of blockage?~~
- **NEW:** Have flame arrestors been maintained per manufacturer's recommendations?
- Why: Revised to acknowledge that flame arrestors have more specific and involved requirements under manufacturer's recommendations—these devices typically require periodic servicing beyond just checks for corrosion and air blockage

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Annual Inspection Checklist Updates

- Tank Equipment Subsection: Mostly minor changes...
- **OLD: Valve checks:** ~~Formerly just "Gate Valve"~~
- **NEW:** Expanded to include gate, ball, and isolation valves—essentially "block" valves.
- Why: Expanded to include more types of valves—ball valves are typically the most common type found on fuel systems, used to isolate portions of the piping system from the tank to be able to work on downstream equipment, although other types exist on AST systems covered by the SP001 Standard



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Portable Inspection Checklist Updates

- One minor change: More explicit direction to inspector to take action if distorted containers are found
- Is the container free of distortions, buckling, denting or bulging?
- **NEW:** Added Note: If “No”, discontinue use of container
- Why: Provides more explicit direction to facility to remove containers with visible problems as identified above.