Tank and Container Inspections

CUPA Programs and Stormwater Workshop

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Presented by:

Jack Becker
STI Tank Inspector, AST-T279
Compliance Services Manager
jbecker@condorearth.com

Ashley Adami
STI Tank Inspector, AST-6837
Associate Environmental Specialist
aadami@condorearth.com

CONDOR EARTH

Sonora, Stockton, Jamestown, Rancho Cordova

Company Website: www.condorearth.com

Course Overview

- Overview of requirements for tank and container inspections:
  - Spill Prevention, Control and Countermeasure (SPCC) & Aboveground Petroleum Storage Act (APSA)
  - Hazardous waste generator
- Review of common deficiencies discovered during inspections

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Spill Prevention, Control and Countermeasure (SPCC)

Requirement to prepare and implement a SPCC Plan

40 CFR 112.3(d)(1): By means of this certification the Professional Engineer attests:

(iv) That procedures for required **inspections and testing** have been established;

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Spill Prevention, Control and Countermeasure (SPCC)

40 CFR 112.7(e): ***Inspections, tests, and records.***

Conduct **inspections and tests** required by this part in accordance with written procedures that you or the certifying engineer develop for the facility.

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Spill Prevention, Control and Countermeasure (SPCC)

40 CFR 112.8(c): ***Bulk Storage Containers.***

(6) **Test or inspect** each aboveground container for integrity on a regular schedule and whenever you make material repairs…

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Spill Prevention, Control and Countermeasure (SPCC)

40 CFR 112.8(c): ***Bulk Storage Containers.***

(6) *Continued* …You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing **tests and inspections**, the frequency and type of **testing and inspections**, which take into account container size, configuration, and design…

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Spill Prevention, Control and Countermeasure (SPCC)

40 CFR 112.8(c): ***Bulk Storage Containers.***

(6) *Continued* ... You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently **inspect** the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas.

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Audience Question

How often are you required to inspect bulk storage tanks by the SPCC Rule?

- Answer: There is no specific frequency specified in the SPCC Rule.

Spill Prevention, Control and Countermeasure (SPCC)

Integrity Industry Standards

- **Steel Tank Institute (STI)**
  - **SP001 Standard for the Inspection of Aboveground Storage Tanks**
- American Petroleum Institute (API)
  - Standard 653 Tank Inspection, Repair, Alteration, and Reconstruction
- Fiberglass Tank & Pipe Institute
  - Recommended Practice FT&V 2007-1

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Spill Prevention, Control and Countermeasure (SPCC)

Tank Category

- STI SP001 Spill Control:
  - Remote impounding;
  - Secondary containment dike/berm;
  - Open top steel diked AST; and
  - Closed top steel diked AST, double-wall AST and concrete-encased AST **with overfill prevention**.

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Spill Prevention, Control and Countermeasure (SPCC)

Tank Category

- SP001 Continuous Release Detection Methods (CRDM):
  - Release prevention barrier (RPB);
  - Double-wall AST or double-bottom AST;
  - Elevated AST;
  - Steel diked AST; and
  - Concrete-encased AST.

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Spill Prevention, Control and Countermeasure (SPCC)

SP001 Tank Categories

Category 1	• Spill Control • CRDM
Category 2	• Spill Control Only
Category 3	• CDRM

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Spill Prevention, Control and Countermeasure (SPCC)

STI SP001 – Table of Inspection Types for Tanks

Capacity (Gallons)	Category	Inspection Type
55 – 1,100	**1 & 2**	• Periodic Inspections
	3	• Periodic Inspections • Non-Destructive Shell Inspection and Leak Test
1,101 – 5,000	**1**	• Periodic Inspections
	2 & 3	• Periodic Inspections • Non-Destructive Shell Inspection and Leak Test
5,001–75,000	**1**	• Periodic Inspections • **Non-Destructive Shell Inspection**
	2 & 3	• Periodic Inspections • Non-Destructive Shell Inspection and Leak Test

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Spill Prevention, Control and Countermeasure (SPCC)

Tank Inspections

- Tank Owner/Representative
  - Periodic inspections (Monthly and Annual)
  - Retain records for 3 years
- Certified Inspector
  - Non-Destructive Shell Inspection and Leak Testing
  - Retain records for the life of the tank

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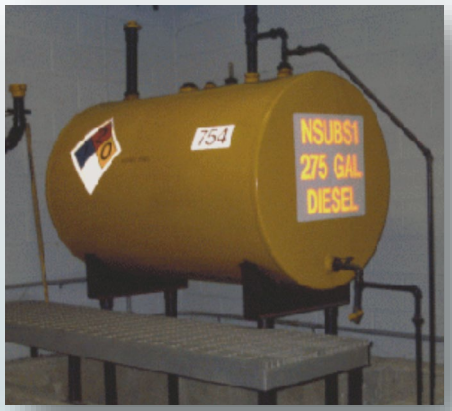
Spill Prevention, Control and Countermeasure (SPCC)

- Tanks and Mobile Refuelers



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STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Prior Inspection Date: _____ Retain until date: _____

Inspector Name (print): _____ Title: _____

Inspector's Signature _____

Tank(s) inspected ID _____

Regulatory facility name and ID number (if applicable) _____

- 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.
- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Inspect the liquid for regulated products or other contaminants and dispose of properly.
- * 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.
- 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.
- Retain the completed checklists for at least 36 months.
- **After severe weather (snow, ice, wind storms) or maintenance (such as coating) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

	ITEM	STATUS	COMMENTS / DATE CORRECTED
	Tank and Piping		
1	Is tank exterior (roof, shell, heads, bottom, connections, fittings, valves, etc.) free of visible leaks? **Note**: *If "No", identify tank and describe leak and actions taken.*	☐ Yes ☐ No*	
2	Is the tank liquid level gauge legible and in good working condition?	☐ Yes ☐ No* ☐ N/A	
3	Is the area around the tank (concrete surfaces, ground, containment, etc.) free of visible signs of leakage?	☐ Yes ☐ No*	

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	ITEM	STATUS
	Tank and Piping	
1	Is tank exterior (roof, shell, heads, bottom, connections, fittings, valves, etc.) free of visible leaks? **Note**: *If "No", identify tank and describe leak and actions taken.*	☐ Yes ☐ No*
2	Is the tank liquid level gauge legible and in good working condition?	☐ Yes ☐ No* ☐ N/A
3	Is the area around the tank (concrete surfaces, ground, containment, etc.) free of visible signs of leakage?	☐ Yes ☐ No*
4	Is tank shell or supports free of soil, vegetation, water, or foreign material collected or covering the grade line (tank chime or bottom projection)?	☐ Yes ☐ No* ☐ N/A
5	Is the primary tank free of water or has another preventative measure been taken? NOTE: Refer to paragraphs 6.10 and 6.11 of the standard for alternatives for Category 1 tanks. N/A is only appropriate for these alternatives.	☐ Yes ☐ No* ☐ N/A
6	For double-wall or double bottom tanks or CE-ASTs, is interstitial monitoring equipment (where applicable) in good working condition?	☐ Yes ☐ No* ☐ N/A
7	For double-wall tanks or double bottom tanks or CE-ASTs, is interstice free of liquid? Remove the liquid if it is found. If tank product is found, investigate possible leak.	☐ Yes ☐ No* ☐ N/A

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	ITEM	STATUS
	Equipment on tank	
8	If overfill equipment has a "test" button, does it activate the audible horn or light to confirm operation? If battery operated, replace battery if needed.	☐ Yes ☐ No* ☐ N/A
9	Is overfill prevention equipment in good working condition? If it is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	☐ Yes ☐ No* ☐ N/A
10	Is the spill container (spill bucket) empty, free of visible leaks and in good working condition?	☐ Yes ☐ No* ☐ N/A
11	Are piping connections to the tank (valves, fittings, pumps, etc.) free of visible leaks? **Note**: *If "No", identify location and describe leak.*	☐ Yes ☐ No*
12	Do the ladders/platforms/walkways appear to be secure with no sign of severe corrosion or damage?	☐ Yes ☐ No* ☐ N/A
	Containment (Diking/Impounding)	
13	Is the containment free of excess liquid, debris, cracks, corrosion, erosion, fire hazards and other integrity issues?	☐ Yes ☐ No* ☐ N/A
14	Are dike drain valves closed and in good working condition?	☐ Yes ☐ No* ☐ N/A
15	Are containment egress pathways clear and any gates/doors operable?	☐ Yes ☐ No* ☐ N/A

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	ITEM	STATUS
	Concrete Exterior AST (CE-AST)	
16	Inspect all sides for cracks in concrete. Are there any cracks in the concrete exterior larger than 1/16"?	☐ Yes* ☐ No ☐ N/A
17	Inspect concrete exterior body of the tank for cleanliness, need of coating, or rusting where applicable. Tank exterior in acceptable condition?	☐ Yes ☐ No* ☐ N/A
18	Visual inspect all tank top openings including nipples, manways, tank top spill containers, and leak detection tubes. Is the sealant between all tank top openings and concrete intact and in good condition?	☐ Yes ☐ No* ☐ N/A
	Other Conditions	
19	Is the system free of any other conditions that need to be addressed for continued safe operation?	☐ Yes ☐ No*

Additional Comments:

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STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ Prior Inspection Date: _____ Retain until date: _____

Inspector Name (print): _____ Title: _____

Inspector's Signature: _____

Tank(s) inspected ID _____

Regulatory facility name and ID number (if applicable) _____

- This checklist is intended as a model. Locally developed checklists are acceptable as long as they are substantially equivalent and meet all applicable inspection checklist items.
- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector per paragraph 4.1.2 of the standard.
- Promptly remove standing water or liquid discovered in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and dispose of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility should regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note that 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.
- Retain the completed checklists for at least 36 months.
- Complete this checklist on an annual basis, supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

	ITEM	STATUS	COMMENTS / DATE CORRECTED
	Tank Foundation/Supports		
1	Free of tank settlement or foundation washout?	☐ Yes ☐ No*	
2	Concrete pad or ring wall free of cracking and spalling?	☐ Yes ☐ No* ☐ N/A	

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	ITEM	STATUS	
			Tank Foundation/Supports
1	Free of tank settlement or foundation washout?	☐ Yes ☐ No*	
2	Concrete pad or ring wall free of cracking and spalling?	☐ Yes ☐ No* ☐ N/A	
3	Tank supports in satisfactory condition?	☐ Yes ☐ No* ☐ N/A	
4	Is water able to drain away from tank if tank is resting on a foundation or on the ground?	☐ Yes ☐ No* ☐ N/A	
5	Is the grounding strap between the tank and foundation/supports in good condition?	☐ Yes ☐ No* ☐ N/A	
			Tank Shell, Heads and Roof
6	Free of visible signs of coating failure?	☐ Yes ☐ No*	
7	Free of noticeable distortions, buckling, denting, or bulging?	☐ Yes ☐ No*	
8	Free of standing water on roof?	☐ Yes ☐ No* ☐ N/A	
9	Are all labels and tags intact and legible?	☐ Yes ☐ No*	

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	ITEM	STATUS	
			Tank Manways and Piping
10	Are piping system joints, manway covers, gaskets, and attachment bolts tight and in good condition with no sign of wear, damage, leaks or corrosion?	☐ Yes ☐ No* ☐ N/A	
11	Are piping supports in good condition and free of corrosion and damage?	☐ Yes ☐ No* ☐ N/A	
12	Is leak or release detection on underground piping being performed and documented if required?	☐ Yes ☐ No* ☐ N/A	
			Tank Equipment
13	Normal and emergency vents free of obstructions?	☐ Yes ☐ No*	
14	Have the level sensing devices (e.g, level gauges, alarms) been checked for operability, where possible, as per manufacturer's instructions or good engineering practice?	☐ Yes ☐ No* ☐ N/A	
15	Have flame arrestors been maintained per manufacturer's recommendations?	☐ Yes ☐ No* ☐ N/A	
16	Is the emergency vent in good working condition and functional, as required by manufacturer? Consult manufacturer's requirements. Verify that components are moving freely (including long-bolt manways).	☐ Yes ☐ No* ☐ N/A	

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	ITEM	STATUS	
17	Is interstitial leak detection equipment in good condition? Are windows on sight gauges clear? Are wire connections intact? If equipment has a test function, does it activate to confirm operation?"	☐ Yes ☐ No* ☐ N/A	
18	Are all valves free of leaks, corrosion, and other damage? Follow manufacturers' instructions for regular maintenance of these items. Check the following and verify (as applicable):		
	☐ Anti-siphon valve	☐ Yes ☐ No* ☐ N/A	
	☐ Check valve	☐ Yes ☐ No* ☐ N/A	
	☐ Gate, ball, or isolation valve	☐ Yes ☐ No* ☐ N/A	
	☐ Pressure regulator valve	☐ Yes ☐ No* ☐ N/A	
	☐ Expansion relief valve	☐ Yes ☐ No* ☐ N/A	
	☐ Solenoid valve	☐ Yes ☐ No* ☐ N/A	
	☐ Fire valve	☐ Yes ☐ No* ☐ N/A	
	☐ Shear valve	☐ Yes ☐ No* ☐ N/A	
19	Are strainers and filters clean and in good condition?	☐ Yes ☐ No* ☐ N/A	

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	ITEM	STATUS	
			Insulated Tanks
20	Free of missing insulation? Insulation free of visible signs of damage? Insulation adequately protected from water intrusion?	☐ Yes ☐ No* ☐ N/A	
21	Insulation free of noticeable areas of moisture?	☐ Yes ☐ No* ☐ N/A	
22	Insulation free of mold?	☐ Yes ☐ No* ☐ N/A	
23	Free of visible signs of coating failure?	☐ Yes ☐ No* ☐ N/A	
			Other Equipment
24	Are electrical wiring and boxes in good condition?	☐ Yes ☐ No* ☐ N/A	
25	Has the cathodic protection system on the tank been tested as required by the designing engineer?	☐ Yes ☐ No* ☐ N/A	

Additional Comments:

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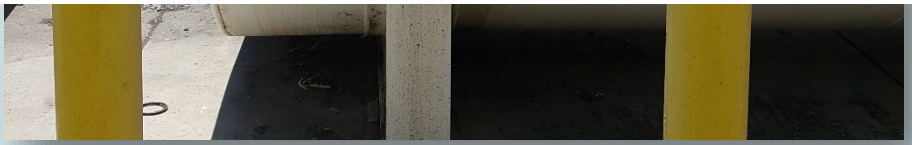
	Tank and Piping	
1	Is tank exterior (roof, shell, heads, bottom, connections, fittings, valves, etc.) free of visible leaks? **Note**: *If "No", identify tank and describe leak and actions taken.*	☐ Yes ☒ No



Integrity Inspections

Any issues with this tank?

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	Tank Shell, Heads and Roof		
6	Free of visible signs of coating failure?	☐Yes ☒No	

STI SP001 Tank Inspections

Any issues with these tanks?

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8	Is overfill prevention equipment in good working condition? If it is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation.	☐ Yes ☒ No ☐ N/A

STI SP001 Tank Inspections

Any issues with this tank?

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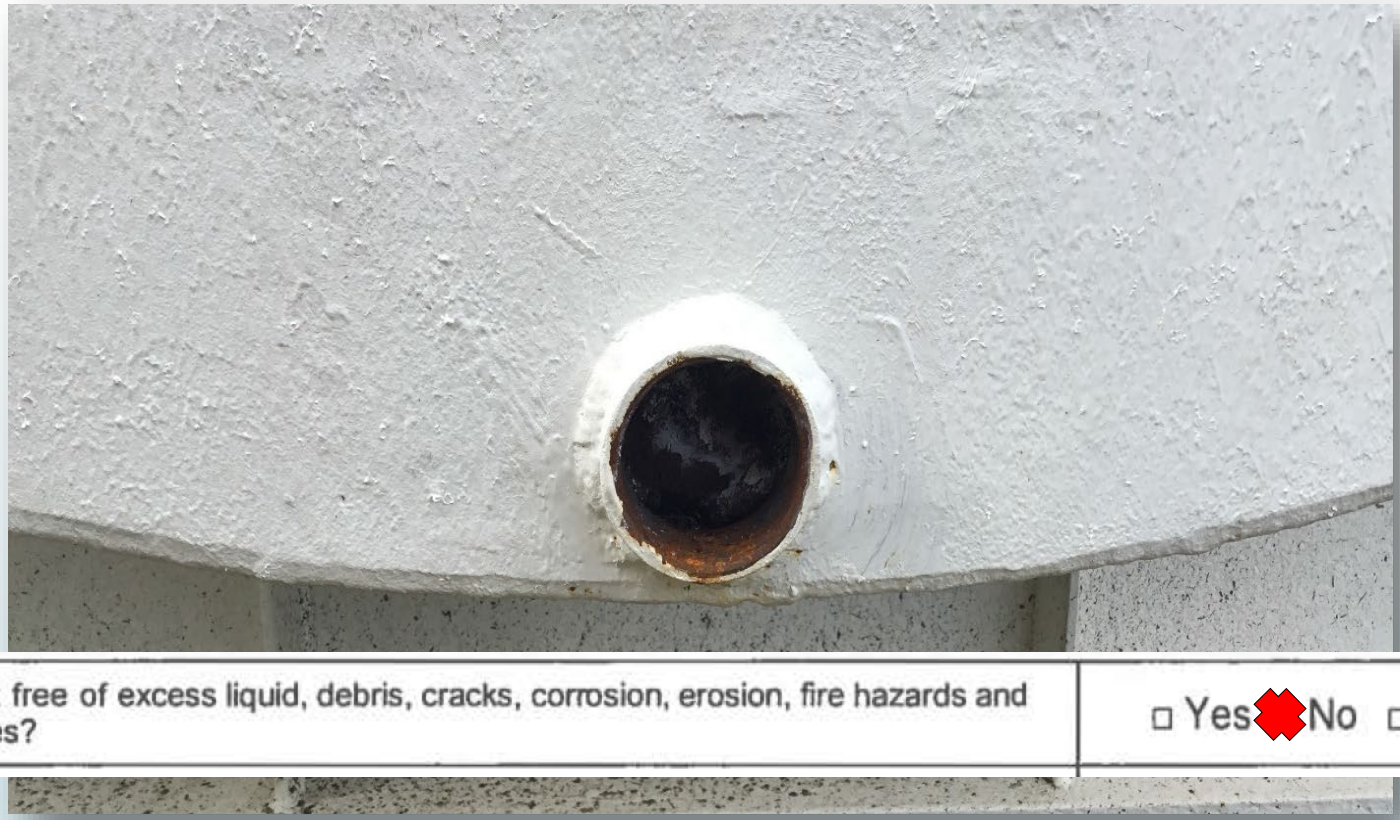

12	Is the containment free of excess liquid, debris, cracks, corrosion, erosion, fire hazards and other integrity issues?	☐ Yes ☒ No ☐ N/A

STI SP001 Tank Inspections

Any issues with this tank?

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14	Is the emergency vent in good working condition and functional, as required by manufacturer? Consult manufacturer's requirements. Verify that components are moving freely (including long-bolt manways).	☐Yes ☒No ☐N/A

STI SP001 Tank Inspections

Any issues with this tank?

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18	Are all valves free of leaks, corrosion and other damage? Follow manufacturers' instructions for regular maintenance of these items. Check the following and verify (as applicable):	
	☒ Fire valve	☐ Yes ☒ No ☐ N/A
	☐ Shear valve	☐ Yes ☐ No ☐ N/A

STI SP001 Tank Inspections

Any issues with this tank?

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Spill Prevention, Control and Countermeasure (SPCC)

Tank Inspections – Common Findings

- Lack of documentation
- Missing, faded and illegible labels
- Water and debris accumulation in containment
- Dispenser drips and spills
- Fill box has accumulation of oil, water or debris
- Containment drain valve is left open or plug removed
- Coating failure and surface rust

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Spill Prevention, Control and Countermeasure (SPCC)

Tank Inspections – Common Findings Continued

- Liquid level gauge is broken or inoperable
- Evidence of overfilling and lack of overfill prevention
- Fitting leaks
- Liquid level gauge is broken or inoperable
- Undersized normal vent
- Lack of emergency venting or inoperable
- Monitoring equipment test function inoperable or batteries need to be replaced

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Spill Prevention, Control and Countermeasure (SPCC)

STI SP001 – Table of Inspection Types for Portable Containers

Category	Inspection Type
1 & 2	• Periodic Inspections

3	• Periodic Inspections
	• DOT testing and recertification
	  • Plastic every 7 years
	  • Steel every 12 years
	  • Stainless steel every 17 years

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Spill Prevention, Control and Countermeasure (SPCC)

- Portable Containers

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Spill Prevention, Control and Countermeasure (SPCC)

Container Inspections

- Tank Owner/Representative
  - Periodic inspections (Monthly)
  - Retain inspections for 3 years
- Certified Inspector (Category 3 ONLY)
  - DOT Recertification and Leak Testing
  - Retain records for the life of the container

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STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Prior Inspection Date: _____ Retain until date: _____

Inspector Name (print): _____ Title: _____

Inspector's Signature (): _____

Container(s) inspected ID _____

Regulatory facility name and ID number (if applicable) _____

- 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.
- This periodic Inspection is intended for monitoring the external condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- * designates an item in a non-conformance status. This indicates that action is required to address a problem. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for at least 36 months.

	Item	Area:	Area:	Area:	Area:
	Portable Container Containment/Storage Area				
1	Are all portable container(s) within designated storage area?	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*
2	Is the containment and storage area free of excess liquid, debris, cracks or fire hazards?	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*
3	Are drain valves closed and in good working condition?	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A
4	Are containment egress pathways clear and any gates/doors operable?	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A
	Container				
5	Is the container free of leaks? Note: *If "No", discontinue use of container*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*
6	Is the container free of distortions, buckling, denting or bulging? Note: *If "No", discontinue use of container*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*	☐ Yes ☐ No*

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	Item	Area:	Area:
		Portable Container Containment/Storage Area	
1	Are all portable container(s) within designated storage area?	☐ Yes ☐ No*	☐ Yes ☐ No*
2	Is the containment and storage area free of excess liquid, debris, cracks or fire hazards?	☐ Yes ☐ No*	☐ Yes ☐ No*
3	Are drain valves closed and in good working condition?	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A
4	Are containment egress pathways clear and any gates/doors operable?	☐ Yes ☐ No* ☐ N/A	☐ Yes ☐ No* ☐ N/A
		Container	
5	Is the container free of leaks? Note: *If "No", discontinue use of container*	☐ Yes ☐ No*	☐ Yes ☐ No*
6	Is the container free of distortions, buckling, denting or bulging? Note: *If "No", discontinue use of container*	☐ Yes ☐ No*	☐ Yes ☐ No*

Comments:

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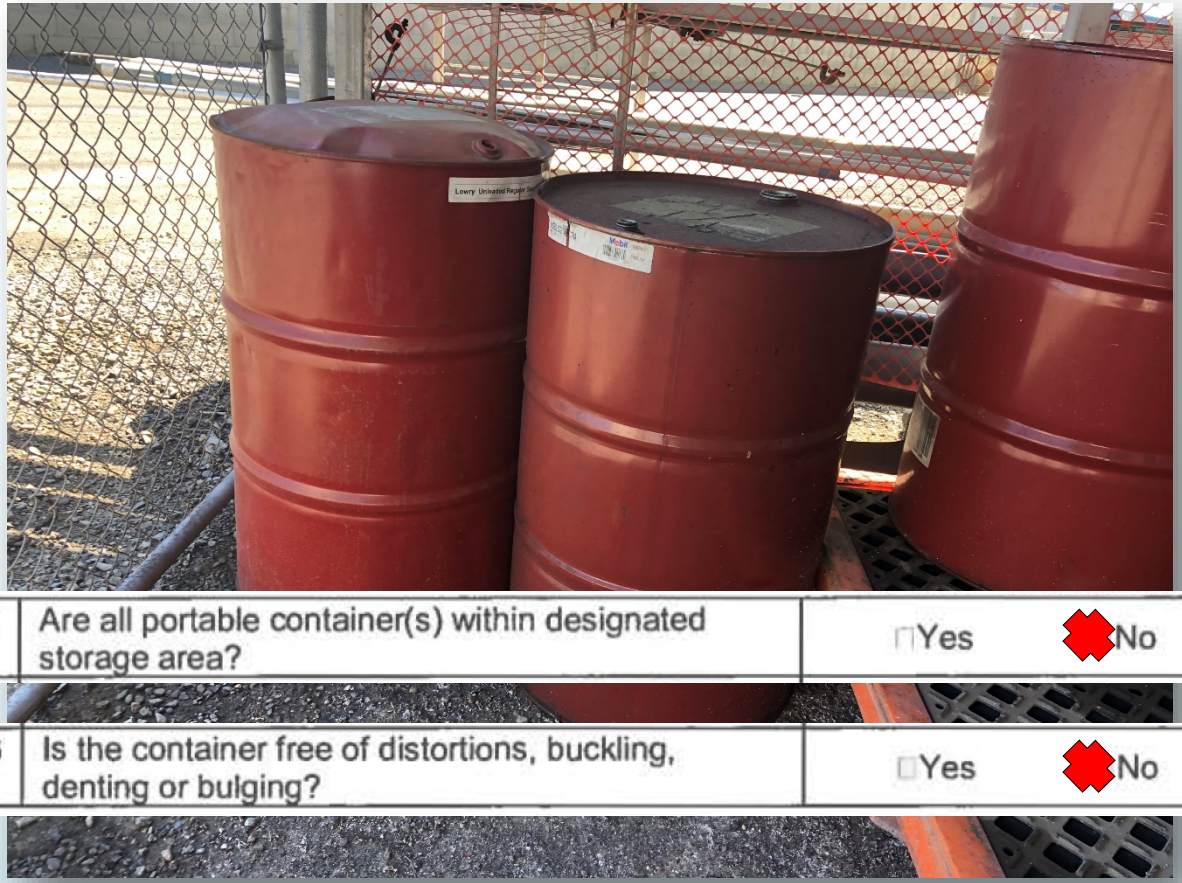

1	Are all portable container(s) within designated storage area?	☐Yes	✖No
6	Is the container free of distortions, buckling, denting or bulging?	☐Yes	✖No

STI SP001 Potable Container Inspections

Any issues with this container?

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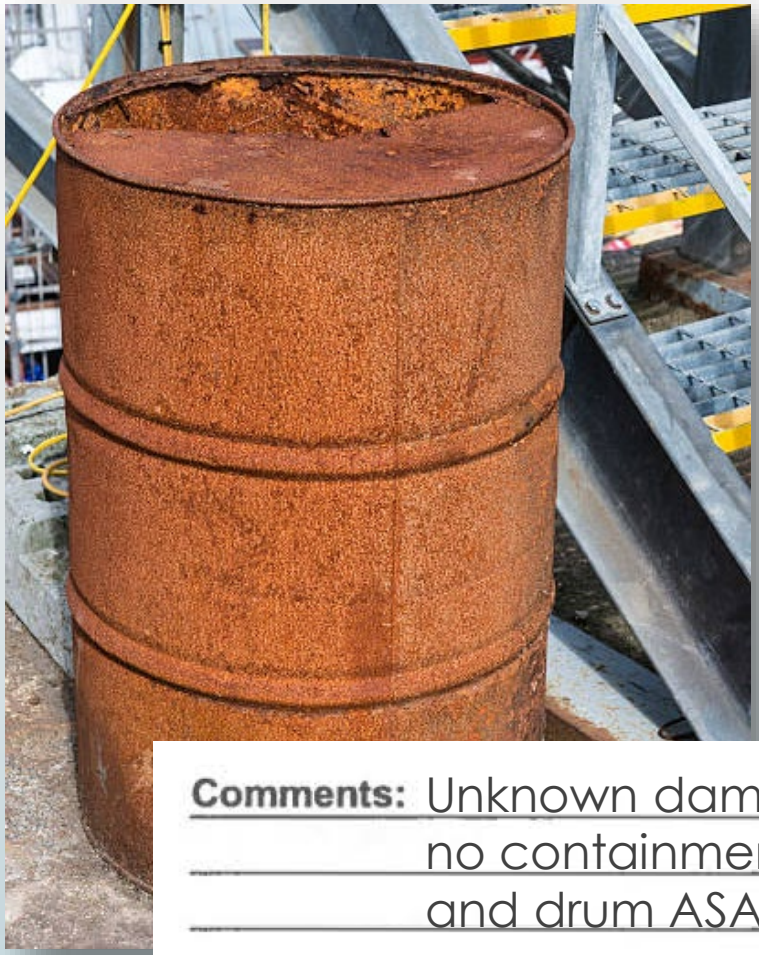

Comments: Unknown damaged drum, missing labels and no containment. Properly dispose of contents and drum ASAP.

STI SP001 Potable Container Inspections

Any issues with this container?

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Spill Prevention, Control and Countermeasure (SPCC)

Portable Container Inspections – Common Findings

- Lack of documentation of inspections
- Containers are not within the designated storage area or containment
- Undersized secondary containment pallet capacity
- Oil or water accumulation in secondary containment
- Drain valve plug missing
- Distortions, denting or bulging
- Illegible labels

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Spill Prevention, Control and Countermeasure (SPCC)

Tank & Portable Container – Inspection Summary

- Tanks/containers should be free of paint failure, rust, dents, bulges and leaks;
- Vents should operable and be free of debris;
- Secondary containment should be free of water, oil, and debris (clean and dry); and
- Promptly address inspection deficiencies.

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Spill Prevention, Control and Countermeasure (SPCC)

Tank & Portable Container – Inspection Summary

- Document the inspection standard in your SPCC Plan;
- Utilize industry standard checklists such as STI SP001or equivalent for periodic inspections; and
- Conduct formal integrity inspections as required and retain records.

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Hazardous Waste Generator

Hazardous Waste Tank System Inspections

22 CCR § 66265.195 Inspections

- Once each operating day inspect:
  - Overfill/spill control equipment in good working order;
  - Aboveground portions for corrosion or releases of wastes;
  - Data from monitoring equipment and leak detection equipment;
  - Construction materials and area immediately surrounding tank system including secondary containment to detect signs of releases; and
  - For uncovered tanks, level and at lest two-foot freeboard.

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Hazardous Waste Generator

Hazardous Waste Tank System Inspections

- Cathodic protection systems, if present, inspect:
  - Proper operation of system within six months of installation and then annually;
  - Bimonthly inspect and/or test impressed current
- Document inspections

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HAZARDOUS WASTE TANK SYSTEM DAILY INSPECTION LOG

(AS REQUIRED BY 22 CCR 66265.195)

Business Name: _____

Business Address: _____

Month: _____

Year: _____

Tank System ID: _____

DAY	Is 2ndary containment free of waste and liquid?		Is the system free of corrosion and evident damage?		Are pipes, valves and pumps free of leaks and in good condition?		Do open tanks have at least 2 ft. of free board?		Is leak detection program/ equipment working?		Inspected by	Comments
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO		
1												
2												
3												
4												
5												
6												
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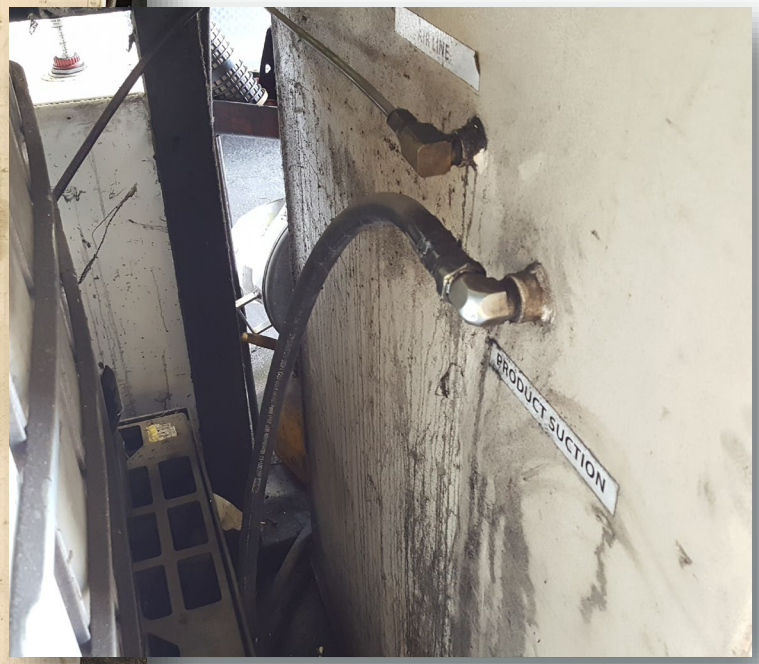

Are pipes, valves and pumps free of leaks and in good condition?		Comments
YES	NO	
	✖	Removed residual oils, no active leaks observed.

HW Tank System Inspections

Any issues with this tank?

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Hazardous Waste Generator

Hazardous Waste Tank System Assessments

22 CCR § 66265.191 (existing) and § 66265.192 (new)

- Written assessment reviewed and certified by an independent, qualified, professional engineer, registered in California
  - the system has sufficient structural integrity
  - is acceptable for the transferring, storing and treating of hazardous waste,
  - and that the tanks and containment system are suitably designed
  - due every 5-years or for modifications of the tank system

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HW Tank System Inspections – Common Findings

- Lack of documentation
- Evidence of overfilling
- Containment has accumulation of waste or water

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HW Storage Areas Inspections

22 CCR § 66265.174

- Inspect container storage or transfer areas weekly:
  - Leaking containers;
  - Deterioration of containers; and
  - Deterioration of containment system by corrosion or other factors.

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HAZARDOUS WASTE STORAGE AREA INSPECTION CHECKLIST

Business Name:_____ Business Address:_____

Person responsible for weekly container inspections: _____

Month_____ Year_____ Inspection Item	Weekly Hazardous Waste Container Inspection					Comments
	Date ___/___/___	Date ___/___/___	Date ___/___/___	Date ___/___/___	Date ___/___/___	
Containers marked properly name/address contents/composition physical state/hazard properties start date						
Stored 90/180/365 days or less						
No leaks/staining						
Closed tops/bungs						
No dents/corrosion						
Incompatible wastes and materials stored separately						
Aisle space maintained						
Secondary containment liquid free						
Inspector's Initials						
Overall Comments:						

In General:

- Acids must be segregated from ignitables.
- Acids must be segregated from caustics.
- Corrosives should be segregated from flammables.
- Oxidizers should be segregated from EVERYTHING.
- Many corrosives are water-reactive.
- Most organic reactives must be segregated from inorganic reactives (metals).

HM-9322-2 (08/10)

INCOMPATIBLE WASTES - Some Deadly Combinations -

Acids + Oil or Grease = FIRE
Acids + Caustics = HEAT/SPATTERING
Caustics + Epoxies = EXTREME HEAT
Chlorine Gas + Acetylene = EXPLOSION
Flammable Liquids + Hydrogen Peroxide = FIRE/EXPLOSION
Aluminum Powder + Ammonium Nitrate = EXPLOSION
Sodium Cyanide + Sulfuric Acid = LETHAL GAS
Ammonia + Bleach = LETHAL GAS

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Month August Year 2024 Inspection Item	Weekly Hazardous Waste Container Inspection					Comments
	Date 8/29/24	Date ___/___/___	Date ___/___/___	Date ___/___/___	Date ___/___/___	
Containers marked properly name/address contents/composition physical state/hazard properties start date	NO					8/29/24 - Label filled out at time of inspection
No leaks/staining	NO					8/29/24 – Cleaned off drum
Closed tops/bungs	NO					8/29/24 – Closed drum bung

Any issues with this container?

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HW Storage Area Inspections – Common Findings

- Lack of documentation
- HW Containers
  - Missing, faded, illegible or non-visible HW labels
  - Accumulation start date missing on HW label
  - Spills, stains on containers or oil accumulation in secondary containment
  - Outside of designated storage area and containment
  - Bungs or lids left open
  - Dents or corrosion
  - Incompatible wastes or materials stored together

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HW Tank System and Storage Area – Inspection Summary

- Tanks, containers and storage areas should be labeled
- Accumulated HW should be removed within the 90/180/365 days depending on the generator type and waste
- Tank systems, containers and storage areas should be free of damage, leaks and spills

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Hazardous Waste Generator

HW Tank System and Storage Area – Inspection Summary

- Promptly address inspection deficiencies.
- Utilize available checklists that follow California Code of Regulations (22 CCR 66265.195 for tanks and 22 CCR 66264.174 for storage areas) or the equivalent for tanks
- Conduct tank inspections daily and HW storage areas weekly and retain records

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Condor Earth

Sonora, Stockton, Jamestown, Rancho Cordova
Company Website: www.condorearth.com

Jack Becker
STI Tank Inspector, AST-T279
Compliance Services Manager
jbecker@condorearth.com

Ashley Adami
STI Tank Inspector, AST-6837
Associate Environmental Specialist
aadami@condorearth.com

Tank and Container Inspections

CUPA Programs and Stormwater Workshop

August 29, 2024

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