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	STANDARD: **EPA 40 CFR Part 112 (SPCC) & API Standard 653**	AUDIT FREQUENCY: **Monthly Audit**

Petroleum Storage Tank Leak Inspection Inspection Checklist

Operational Scope: This checklist outlines the mandatory inspection protocols for identifying and mitigating structural defects and containment failures in petroleum storage systems. Its primary objective is to prevent environmental spills, ensure regulatory compliance under SPCC guidelines, and safeguard operational personnel.

MANDATORY PPE:	Hard Hat (ANSI Z89.1), Flame-Resistant (FR) Coveralls (NFPA 2112), Steel-Toe Boots (ASTM F2413), Chemical-Resistant Nitrile Gloves, Safety Glasses with Side Shields (ANSI Z87.1), H2S Portable Gas Detector
PREREQUISITES:	Review previous inspection logs and outstanding corrective actions. | Verify weather conditions are safe for outdoor tank perimeter inspection. | Notify control room of active on-site facility audit.

FOUNDATION, SHELL, AND EXTERNAL STRUCTURAL INTEGRITY

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Tank Shell Plates**	Inspect exterior walls for visible corrosion, pitting, bulges, buckling, or weeping product stains.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
2	**Foundation and Ringwall**	Check concrete or asphalt ringwall for major cracking, spalling, or erosion that could compromise tank leveling.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
3	**Anchor Bolts and Chairs**	Inspect anchor bolts for severe corrosion, looseness, or missing nuts; verify chair welds are crack-free.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
4	**Shell-to-Bottom Joint**	Examine perimeter chime area for signs of active product leakage or accelerated corrosion.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

SECONDARY CONTAINMENT AND PIPING APPURTENANCES

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
5	**Secondary Containment Dike/Berm**	Verify containment capacity is free from excess rainwater, debris, and structural breaches in earthworks or concrete walls.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
6	**Containment Drain Valve**	Confirm storm-water drain valve is securely closed, locked, and uncompromised when not actively draining inspected clean water.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
7	**Piping Connections and Flanges**	Inspect inlet, outlet, and drain piping flanges for signs of gasket leaks, weeping, or bolt corrosion.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
8	**Valves and Actuators**	Verify manual and automated valves operate smoothly without stem packing leaks or external damage.	**Standard**	[ ] PASS [ ] FAIL [ ] N/A

VENTING, INSTRUMENTATION, AND SAFETY SYSTEMS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
9	**Pressure/Vacuum Relief Vent**	Inspect conservation vent pallets, screens, and flame arrestors for blockages, icing, or mechanical sticking.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
10	**Level Gauges and High-Level Alarms**	Check mechanical/electronic level indicators for accuracy and test high-level alarm functionality.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
11	**Earthing and Grounding System**	Inspect grounding cables, clamps, and test points for physical continuity, corrosion, or breakage.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A

Certified Inspector / Lead Operator Signature: _____	**Date / Time:** _____	**Badge / Cert #:** _____
Site Safety Supervisor / Operations Manager Sign-off: _____	**Review Date:** _____	**Audit Status:** [ ] Approved [ ] Rectify

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