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	STANDARD: **EPA 40 CFR Part 112 (SPCC) & OSHA 29 CFR 1910.106**	AUDIT FREQUENCY: **Monthly Audit**

Petroleum Storage Tank Leak Inspection Safety Audit Checklist

Operational Scope: This audit checklist governs the systematic inspection of aboveground and underground petroleum storage tanks to detect fugitive emissions, structural degradation, and containment breaches. The objective is to mitigate spill risks, protect environmental receptors, and ensure strict compliance with federal hydrocarbon storage regulations.

MANDATORY PPE:	Flame-Resistant Clothing (FRC NFPA 2112), Steel-Toe Safety Boots (ASTM F2413), Chemical-Resistant Nitrile/Neoprene Gloves, Safety Glasses with Side Shields (ANSI Z87.1), Half-Mask Organic Vapor Respirator
PREREQUISITES:	Review previous inspection logs and outstanding corrective action reports | Verify calibration and operability of combustible gas indicators (CGIs) | Obtain hot/cold work permits and establish exclusion zones if required

STRUCTURAL INTEGRITY & SHELL INSPECTION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Tank Shell & Exterior Walls**	Inspect for signs of corrosion, bulging, blistering, or structural buckling. No active weeping or product staining permitted.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
2	**Roof Seals & Venting Systems**	Verify pressure-vacuum (PV) vents are unblocked, flame arresters are clean, and floating roof seals show no gap tears or product accumulation.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
3	**Welded Seams & Rivets**	Examine shell-to-bottom and vertical joints using non-destructive visual methods for hairline cracks, pitting, or rust bleeding.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**

VALVES, PIPING & SECONDARY CONTAINMENT

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
4	**Valves, Flanges & Manways**	Check all inlet/outlet valves, drain valves, and blind flanges for dripping product, missing bolts, or deteriorated gaskets.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
5	**Secondary Containment Dike / Berm**	Ensure earthen or concrete containment is free of cracks, structural settling, and vegetation overgrowth. Capacity must maintain at least 110% of tank volume.	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
6	**Containment Drain Valve**	Stormwater drain valve must be locked in the closed position when not actively dewatering uncontaminated rainwater.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
7	**Overfill Prevention Equipment**	Test high-level alarms, automated shut-off devices, and visual level gauges for unhindered operational response.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**

MONITORING, GROUNDING & SAFETY SIGNAGE

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
8	**Leak Detection Systems**	Verify electronic interstitial monitors, vapor sensors, or groundwater monitoring wells are powered, error-free, and logging properly.	**Critical (Immediate Out of Service)**	**[ ] PASS [ ] FAIL [ ] N/A**
9	**Static Grounding & Bonding**	Inspect grounding cables and earth-connection rods for corrosion, fraying, or high electrical resistance (>25 ohms).	**Warning**	**[ ] PASS [ ] FAIL [ ] N/A**
10	**Safety Signage & Placards**	Ensure NFPA hazard diamonds, 'No Smoking / Flammable Liquid' warnings, and emergency contact plaques are legible and unobstructed.	**Standard**	**[ ] 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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