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	STANDARD: **NFPA 652 / OSHA 29 CFR 1910.22**	AUDIT FREQUENCY: **Monthly Audit**

Combustible Dust Hazard Assessment Safety Audit Checklist

Operational Scope: This audit protocol establishes systematic evaluation procedures for identifying, evaluating, and mitigating combustible dust accumulations in hydrocarbon processing and energy facilities. The primary objective is to prevent catastrophic secondary dust explosions and ensure ongoing compliance with national fire protection standards.

MANDATORY PPE:	Flame-Resistant (FR) Coveralls (NFPA 2112), Anti-Static Safety Boots (ASTM F2413), Impact-Resistant Safety Glasses (ANSI Z87.1), Conductive Hard Hat (ANSI Z89.1), Dust Respirator / N95 or P100 (NIOSH), Leather Work Gloves
PREREQUISITES:	Verify active hot work permits are suspended in the immediate inspection zone. | Review previous month's fugitive dust remediation logs and corrective action statuses. | Ensure portable intrinsically safe flashlights and testing meters are calibrated.

DUST ACCUMULATION & HOUSEKEEPING INSPECTION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Elevated Structural Surfaces**	Accumulation of dust on beams, pipes, and cable trays does not exceed the 1/32-inch threshold (or covers less than 5% of the surface area).	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
2	**Floor and Process Area Cleanliness**	Process floors are free of fugitive powder piles; cleaning is conducted using approved HEPA vacuum systems rather than compressed air.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
3	**Enclosure and Housing Integrity**	Housings for mills, conveyors, and separators show no gaps, breaches, or leaking seals that allow fine dust dispersion into operating areas.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

IGNITION SOURCE CONTROL & VENTILATION

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
4	**Electrical Classification & Fixtures**	All lighting, motors, and control panels within Class II hazardous locations maintain required explosion-proof NEMA ratings and intact gaskets.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
5	**Dust Collection and Exhaust Systems**	Baghouses and dust collectors operate at designed differential pressure ranges with functioning magnehelic gauges and active spark detection.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
6	**Static Dissipation & Grounding**	Flexible hoses, ductwork, and pneumatic transfer lines display verified electrical continuity and low-resistance bonding (< 10 ohms).	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
7	**Hot Surface Monitoring**	Bearings, gearboxes, and motor casings are free from excessive frictional heating exceeding maximum allowable surface temperature limits.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

EXPLOSION PROTECTION & EMERGENCY READINESS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
8	**Explosion Venting & Isolation**	Rupture panels, chemical isolation systems, and fast-acting dampers are unobstructed, unpainted, and certified within inspection intervals.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
9	**Fire Suppression Systems**	Dry chemical and water mist suppression systems tied to dust collectors are fully charged, inspected, and interlocked to shut down equipment on activation.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
10	**Employee Training & Documentation**	Operators on shift demonstrate working knowledge of combustible dust hazards, housekeeping protocols, and emergency evacuation procedures.	**Standard**	[ ] PASS [ ] FAIL [ ] N/A

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

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