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	STANDARD: **OSHA 29 CFR 1910.22 / NFPA 652 / NFPA 664**	AUDIT FREQUENCY: **Monthly Audit**

Combustible Dust Hazard Assessment Inspection Checklist

Operational Scope: This checklist establishes mandatory protocols for identifying, evaluating, and mitigating combustible dust accumulations in classified hazardous locations within oil, gas, and energy facilities. The primary objective is to prevent catastrophic dust deflagration, fire, or explosion events through rigorous hazard assessment and strict regulatory compliance.

MANDATORY PPE:	Hard Hat (ANSI Z89.1), Anti-Static Flame-Resistant (FR) Coveralls, Conductive Steel-Toe Safety Boots, Safety Glasses with Side Shields (ANSI Z87.1), Disposable N95 Dust Respirator, Arc-Flash Rated Gloves
PREREQUISITES:	Review previous audit logs and active hot work permits in the designated zone | Ensure all non-sparking inspection tools and intrinsically safe portable monitors are calibrated | Notify facility control room of ongoing combustible dust hazard assessment walk-through

DUST ACCUMULATION & STRUCTURAL CONTAINMENT

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
1	**Horizontal Surfaces & Elevated Beams**	Dust layer thickness does not exceed the NFPA action threshold of 1/32 inch (0.8 mm) or 5% of surface area.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
2	**Ductwork, Piping & Cable Trays**	Surfaces are free from fugitive dust buildup that could propagate secondary explosions during a primary upset event.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
3	**Building Enclosures & False Ceilings**	Hidden spaces, ledges, and ceiling trusses inspected with borescope show no hidden hazardous accumulations of combustible fines.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A

DUST COLLECTION & VENTILATION SYSTEMS

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
4	**Dust Collector Baghouse & Filters**	Filter elements are intact without tears, differential pressure is within manufacturer specification, and pulse-cleaning operates effectively.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
5	**Explosion Venting & Duct Diverters**	Explosion relief panels are uncompromised, unobstructed, and directed safely outdoors away from personnel paths.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
6	**Spark Detection & Extinguishing Systems**	Sensors are clean, optical lenses are unobstructed, and functional self-test indicates system readiness.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
7	**Rotary Air Locks & Discharge Valves**	Air locks maintain adequate seal to prevent flame front propagation between the collector and process machinery.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A

IGNITION SOURCE CONTROL & HOUSEKEEPING

#	COMPONENT / ITEM	VERIFICATION CRITERIA & ACCEPTANCE STANDARD	SEVERITY	STATUS
8	**Electrical Equipment & Class II Ratings**	All motors, lighting fixtures, and control panels meet NEC Class II, Division 1 or 2 hazardous location specifications and are dust-tight.	**Critical (Immediate Out of Service)**	[ ] PASS [ ] FAIL [ ] N/A
9	**Bonding and Grounding Systems**	Pneumatic transfer lines, cyclones, and blending vessels exhibit verified electrical continuity with resistance under 10 ohms.	**Warning**	[ ] PASS [ ] FAIL [ ] N/A
10	**Vacuum Cleaning Equipment**	Only approved Class II hazardous location vacuums or centralized vacuum systems are utilized for housekeeping (no compressed air blowdown).	**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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