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| **Hazard Assessment Risk Factor Question:** | **What response is needed to get Mitigation Tech** | **Mitigation technique:** |
| 1. Any suspended dust in air? Where? | Yes | Control accumulation and apply housekeeping. SEE NFPA 664 or 654 OSHA 1910.22 WAC 296-800-22005 (Sawmill 296-78-71019) (296-62-100 ----11013) |
| 1. Equipment electrically grounded? | No | Test & Ground all electrical equipment as needed. SEE NFPA 664 or 654 (WAC 296-24-95703)(Sawmill 296-78-71019) |
| 1. Any energized damaged electrical conduits? | Yes | Repair or Replace. |
| 1. Any exposed wiring that could short, or cause a spark? | Yes | Repair and Upgrade to electrical code. |
| 1. Is HOT WORK controlled by a permit system? | No | Implement written program-Formulate procedures-Acquire equipment & Train employees. WAC 296-24-695 |
| 1. Are there any ENCLOSURES where combustible dust is present? | Yes | Review NFPA 68, 69, 664, 654 depending on dust type. Housekeeping WAC 296-800-22005 |
| 1. Are there ANY IGNITION SOURCES that can possibly reach the inside of a process enclosure? | Yes | SEE NFPA 664 for methods of preventing ignition source transmission |
| 1. Prior to today, was there a deflagration or explosion event involving combustible dust? | Yes | Implement controls specified under NFPA 664 and housekeeping. WAC 296-800-22005 |
| 1. Do you have engineering controls in place for combustible dust? | No | Engineering should be used to control an explosion and to collect dust. They must be on a periodic maintenance and testing schedule. |
| 1. Do you have administrative controls in place for combustible dust? | No | Perform a dust accumulation rate assessment and set up a house keeping plan to control the dust according to NFPA code 664 or 654. Housekeeping WAC 296-800-22005 |
| 1. Does a DEFLAGRATION (fireball) hazard exist? | Yes | Review and implement NFPA 69 |
| 1. Are deflagration suppression and explosion venting components used? | No | Component indicated as present-verify if appropriate, Check NFPA 69 to verify if component is needed. WAC 296-800-11010 (Sawmill 296-78-515(1)(a)) |
| 1. MANAGEMENT of CHANGE (MOC) - Are there written procedures to manage the change of process materials, technology, equipment, procedures, and facilities? | No | UPGRADE to meet all requirements. |
| 1. HOT SURFACES - Are exterior surfaces of heated process equipment in contact with wood prevented from a MAXIMUM allowable temperature of 399 degrees (500°F or 260°C)? | Yes | Dust exposed to HOT SURFACES exceeding the auto-ignition temperature of wood at 399 degrees may ignite. |
| 1. BEARINGS - Are they monitored for adequate lubrication and excessive wear? | No | Inadequate lubrication & wear leads to frictional heating creating an ignition source.  (296-806-20022)(296-806-20024) |
| 1. POWERED INDUSTRIAL TRUCKS - If they operate in areas with a deflagration hazard, are they the correct classification? NO   (See NFPA 505) | No | Powered Industrial Trucks are sources of ignition-CHECK Classification WAC 296-863-50005 |
| 1. STATIC ELECTRICITY - Does equipment contain design features that include - Conductivity, bonding & grounding, grounded metal combs, or other features? | No | Consult electrician for Static Electricity minimizations |
| 1. FRICTION - Is all equipment designed, installed, and operated to maintain alignment and lubrication to avoid frictional heat ignition? | No | CHECK equipment to minimize frictional heating |
| 1. Does the dust collection system placement at your location meet the NFPA requirements? | No | Inspect and maintain dust collection system according to manufactures recommendations and NFPA 654. |
| 1. Is foreign material (AKA, “Tramp metal”), removed by self-cleaning magnets, air separators, or BOTH? | No | Review NFPA 664or 654 and correct |
| 1. Does equipment meet NFPA requirements for FIRE or DEFLAGRATION hazards? | No | SEE NFPA 664 or 654 |
| 1. EMERGENCY PLANNING & RESPONSE - Does it meet the requirements of OSHA 29 CFR 1910.38?   WAC 296-24-567 | No | Meet requirements for Emergency Planning & Response. Consult 29 CFR 1910.38 - Emergency Action Plan or WAC 296-24-567  (Sawmill 296-78-525(1)(a)(iv) |
| 1. Is the Housekeeping & Inspection program is DEVELOPED, MAINTAINED, & DOCUMENTED? | No | Develop, maintain & document Housekeeping & Inspection program OSHA 1910.22, WAC 296-800-22005 |
| 1. Is Production Equipment maintained and operated to minimize debris & dust escape? | No | Seal breaches in system to collect fugitive dust to prevent buildup. (Sawmill 296-7871019(5)) |
| 1. DETERMINATION, REQUIREMENT, OBSERVATION, MEASUREMENT Is DUST ACCUMULATION equal to or greater than 1/32 (1/8 for wood dust) of an inch? | Yes | Control dust accumulation to less than max accumulation. NFPA 654 & 664 |
| 1. DETERMINATION, REQUIREMENT, OBSERVATION, and MEASUREMENT is there VISIBLE DUST ACCUMULATION at the following areas? Slopes, Overhead beams, Joists, Ducts, Equipment tops. | Yes | Control accumulation OSHA NEP CLP 03-00-008 or DOSH Directive 12.85 |
| 1. Are DUST ACCUMULATIONS on all surfaces GREATER THAN 5% of surface area? | Yes | Calculate area square footage and control to less than 5% |
| 1. Are DUST ACCUMULATIONS CONTROLLED under the Housekeeping standard? (OSHA 29 CFR 1910.22 or WAC 296-800-22005) | No | Consult OSHA NEP or DOSH Directive standard and minimize dust accumulation. |
| 1. DETERMINE if IGNITION SOURCES are present anywhere in the inspection area. Complete the questions below: ANSWER ALL - Are ANY of the following devices present? Space heaters, heat guns soldering irons, other heat producing items, welding, cutting burning, other flame sources, hot plates and other appliances, Halogen or Metal Halide lamps Metal surfaces such as bearings, drive motors, etc. near the auto-ignition temperature near the auto-ignition temperature (> 399 \*F) as verified by DIRECT MEASUREMENT or Thermographic Imagery? | Yes | Remove or prohibit DEVICES in area when deflagration or explosion conditions exist |
| 1. Could wood dust become dispersed in air due to vibration, other disturbances, OR a primary explosion? | Yes | Control by minimizing accumulation and controlling ignition sources. |