

# Trinity Consultants Transforms Rendering Company's Combustible Dust Challenges into Sustainable Safety Gains

## CHALLENGE

Several of the company's U.S. facilities were flagged by OSHA for potential combustible dust hazards, particularly in areas where rendered meal dust could dry out and pose an elevated risk of fire or explosion. Without in-house DHA expertise, the company sought an experienced partner to perform thorough site evaluations and create actionable plans for compliance and safety improvements.

## SOLUTION

Trinity conducted on-site DHAs at six high-risk plants. After walk-throughs with facility teams, Trinity cross-referenced observations with NFPA guidelines and delivered detailed reports outlining each site's vulnerabilities. The findings included recommendations for enhanced housekeeping protocols, grounding and bonding measures, and additional safeguards to minimize the potential for dust-related incidents.

## RESULT

By swiftly implementing Trinity's recommendations, the company effectively addressed OSHA's concerns, leading to the closure of all outstanding combustible dust cases. With strengthened procedures in place, the company now relies on the comprehensive DHA reports as a model for similar facilities worldwide, embedding a proactive culture of safety and compliance.

A global leader in sustainable food and feed ingredients found itself under increased scrutiny by the Occupational Safety and Health Administration (OSHA). Several of its U.S. facilities, which are responsible for turning leftover or expired food products into finished meal for use in pet food, animal feed, and fertilizer, were flagged for potential combustible dust hazards. With over 100 sites worldwide, the company recognized the immediate need for expert support to perform Dust Hazard Analyses (DHAs) and address the OSHA concerns.

## CHALLENGE

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The company specializes in rendering leftover or expired food from slaughterhouses, bakeries and restaurants—converting it into protein-rich meal for pet food and animal feed, among other applications. While much of this material retains enough moisture to limit combustibility, any dust that settles in rafters or other inaccessible areas can dry out over time, posing a serious fire or explosion hazard. Additionally, ground meal is dried and stored prior to shipping to customers.

When OSHA raised concerns in 2022 about combustible dust at several U.S. locations, the company faced potential legal repercussions. Without an internal DHA expert on staff, leadership decided to bring in outside expertise. After a competitive bidding process, Trinity Consultants was selected to evaluate six plants considered “worst-case scenarios” within various operational units, including rendering, blending, and bakery mills. The goal was to ensure worker safety, maintain regulatory compliance, and establish a proactive dust management strategy that could be applied company wide.

## SOLUTION

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Trinity worked closely with the company’s corporate safety and engineering teams to coordinate visits at six facilities identified as “worst-case scenarios” for combustible dust. Upon arriving at each site, Trinity’s specialists walked through the various process steps with the regional safety managers and location management teams and conferred with operators and floor personnel. Trinity noted any immediate areas of concern and shared those red flags directly with site leadership to highlight urgent issues.

After each visit, Trinity returned to its offices to review all collected data and cross-reference it with National Fire Protection Association (NFPA) guidelines, which ensured that regulations were being met and that even subtle hazards were adequately addressed. Once the company’s legal department approved the findings, Trinity presented the finalized DHA reports and personalized recommendations for each facility to the company’s safety and engineering leadership.

## RESULT

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Once Trinity delivered its final DHA reports and recommendations, the company prioritized addressing the highest-risk items first. Although each facility had specific requirements—such as installing grounding and bonding systems or adding isolation features to critical equipment—the most widespread recommendation was to strengthen housekeeping practices and ensure that dust never had the opportunity to accumulate. The immediate focus on remediation demonstrated the company’s commitment to mitigating hazards and resulted in OSHA dropping all existing combustible dust cases against the organization, sparing it significant legal complications and costs.

Beyond achieving regulatory compliance and resolving legal issues, the company gained a deeper understanding of how to manage combustible dust hazards moving forward. Rather than commissioning new DHAs for each site, leadership recognized that the existing reports were thorough enough to serve as a template for similar operations across the organization. Facilities with comparable layouts, equipment, or products can now reference the original DHAs to inform their own housekeeping measures, SOP revisions, and equipment upgrades. This proactive approach not only helps avoid future incidents but also embeds a culture of safety and compliance that will continue to evolve as new challenges arise.

### ABOUT TRINITY CONSULTANTS

Trinity Consultants, a leading global environmental consulting firm, provides services and solutions in the EHS Regulatory Compliance, Built Environment, Life Sciences, and Water & Ecology markets. Founded in 1974, Trinity has the technical expertise, industry depth, and capabilities to help clients achieve their goals across the natural and built environments.