



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATIONS STATUS CHANGE

SUMMARY

Report:	Hoeganaes Corporation Fatal Flash Fires
Recommendation Number:	2011-4-I-TN-R3
Date Issued:	January 5, 2012
Recipient:	Occupational Safety and Health Administration
New Status:	Closed – Acceptable Alternate Action
Date of Status Change:	February 15, 2016

Recommendation Text:

Revise the Combustible Dust National Emphasis Program (NEP) to add industry codes for facilities that generate metal dusts (e.g., North American Industrial Classification System, NAICS, code 331111 Iron and Steel Mills, and other applicable codes not currently listed). Send notification letters to all facilities nationwide under these codes to inform them of the hazards of combustible metal dusts and NEP coverage.

Board Status Change Decision:

A. Rationale for Recommendation

Between January and May 2011, the CSB investigated three iron dust-related incidents at the Gallatin, Tennessee, facility of the Hoeganaes Corporation, a worldwide producer of atomized iron and steel powders. The first iron dust flash fire incident killed two workers and the second injured one. The third incident, a hydrogen explosion and resulting iron dust flash fires, claimed three lives and injured two other workers.

Since no federal Occupational Safety and Health Administration (OSHA) general industry standard yet exists for combustible dusts, OSHA initiated a National Emphasis Program (NEP) in October 2007 to focus enforcement efforts on preventing fires and explosions in facilities that create, handle, or store combustible dusts (“Dust NEP”).¹ The program provides guidance to OSHA inspectors about applying existing safety statutes or standards, such as the General Duty Clause (OSHA Act, Section 5(a)(1)) and the housekeeping provisions of the Walking-Working Surfaces standards (29 CFR 1910.22(a)), to facilities with combustible dust.

To determine which facilities are targeted by the NEP program, OSHA uses North American Industry Classification System (NAICS) codes, which classify facilities by primary business activity. Two appendices to OSHA’s NEP instruction (CPL 03-00-008), Appendix D-1 and D-2, list NAICS codes for industries considered by the agency to have “more frequent and/or high consequence combustible dust explosions and fires” and those “that may have the potential” for dust explosions and fires. Section IX of the instruction specifies that facilities within these NAICS codes are randomly selected as targets for combustible dust hazard inspections.

¹ The NEP was revised and reissued in March 2008, following the devastating sugar dust explosions and fire at the Imperial Sugar refinery in Port Wentworth, Georgia. See https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=directives&p_id=3830. Accessed August 14, 2013. Recommendations staff understand from OSHA that the NEP is an ongoing program; there is no end date planned.

During its investigation, the CSB found that the NAICS code applicable to the Hoeganaes Gallatin facility (331111, Iron and Steel Mills), is not included in either Appendix D-1 or D-2, although codes for other industries that handle metal appear in both lists. According to the U.S. Census Bureau 2007 Economic Census, there were 352 facilities in the Iron and Steel Mills industry code (331111) employing over 106,000 workers. It is unknown how many of these facilities present combustible dust hazards. Therefore, the CSB recommended that federal OSHA revise its NEP to add additional industry codes for facilities that generate metal dusts, such as NAICS Code 331111, the code assigned to Hoeganaes.

B. Response to the Recommendation

In March 2013, OSHA issued a memorandum to OSHA Regional Administrators and State Plan designees directing area offices to use local knowledge to add iron and steel mills they know or believe process atomized combustible iron powder to their area's inspection lists and encouraging state plans to add such facilities to their NEP enforcement programs. The memorandum included a list of the 17 iron and steel mill facilities in the United States that OSHA believes process atomized metal powders. Since the memorandum was issued, two of the 17 facilities have been inspected under OSHA's Dust NEP.

C. Board Analysis and Decision

As OSHA proposed and implemented alternative actions that meet the intent of the recommendation, the Board voted to change the status of CSB Recommendation No. 2011-4-I-TN-R3 to: **“Closed – Acceptable Alternate Action.”**