

**Miller, Diane M. (CDC/NIOSH/EID)**

**From:** John Astad [messinabout@earthlink.net]  
**Sent:** Tuesday, January 05, 2010 5:25 PM  
**To:** NIOSH Docket Office (CDC)  
**Cc:** NORACoordinator (CDC)  
**Subject:** 184 - Draft National Manufacturing Agenda  
**Attachments:** CDPI\_comment\_Docket Number NIOSH-184.doc

Dear Sir,

Attached are comments in regards to **Docket Number NIOSH-184 Draft National Manufacturing Agenda**. I apologize in submitting past the 5:00 p.m. ET on December 15, 2009 deadline. I did not find out about the Draft National Manufacturing Agenda until after the deadline.

The primary areas where I provided comment regarding combustible dust fire and explosion hazards in the manufacturing sector was in the following Strategic Goals areas:

- **Strategic Goal 8:** Small businesses and Specific sub-sectors
- **Strategic Goal 9:** Emerging risks
- **Strategic Goal 10:** Catastrophic incidents

Currently there is not enough research education, information, and training for manufacturing stakeholders concerning combustible dust fire and explosion hazards in the workplace. I look forward to possibly actively participating and collaborating with NIOSH in regards to the National Manufacturing Agenda so as to provide vital educational resources to the nation's vital manufacturing sector.

A few weeks ago Ray Sinclair, NIOSH, Coordinator for the Small Business Assistance and Outreach Program at the Cincinnati, OH office contacted me in a request for any information on the size of the firms that have experienced combustible dust explosions. Through the results of my intensive research work on combustible dust incidents I was able to assist Ray's research efforts. Hopefully I can be of more assistance to NIOSH in regards to the National Manufacturing Agenda, where the subsector approach of national industries (NAICS) is my area of expertise.

I look forward to hearing from you in the near future. Thanks

Kind Regards,

John Astad

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**Comment-Docket Number NIOSH-184**

**Strategic Goal 8  
Small Businesses and Specific Sub-Sectors**

**Strategic Goal 8:** Reduce the incidence of injuries, illnesses, and fatalities within small businesses (fewer than 100 employees) and specific sub-sectors within the manufacturing sector.

**Intermediate Goal 8.1:** Identify and prioritize occupational safety and health issues within small businesses and specific sub-sectors within the manufacturing sector.

**Activity/Output Goal 8.1.1:** Collect, compile, and analyze data and available literature to identify sub-sectors with high risk of injuries/illnesses and fatalities.

**Comment:** Flash fire burn injuries occur when workers are exposed to combustible dust related fires and explosions. Currently, the primary resources in obtaining information on workplace fires and explosions are through media reports. In contrast stakeholders need to collaborate concerning incident occurrences that are not reported by the mainstream media so as to develop appropriate layers of protection.

**Activity/Output Goal 8.1.2:** Identify barriers to interventions in high-risk sub-sectors.

**Comment:** A primary barrier is that employers are not required to report injuries to OSHA unless there are three or more injuries or one fatality. Subsequently, this is a reactive position instead of proactive and fails to include near misses that could eventually develop into catastrophic events.

**Activity/Output Goal 8.1.3:** Understand job-related factors that contribute to injury risk in high-risk sub-sectors.

**Comment:** Housekeeping is the primary factor in reducing the possibility of catastrophic secondary dust explosions. Education and training of employees and employers of the consequences of poor housekeeping that results in catastrophic explosions will assist in providing a safe workplace.

**Intermediate Goal 8.2:** Collaborate in the development of tools and interventions to aid small businesses in identifying and controlling hazards.

**Comment:** Local and Volunteer Fire Department that respond to combustible dust related fires and explosion in the workplace must be included in the collaborative effort. Additionally building inspectors, fire marshals, fire inspectors, insurance inspectors, and other Authorities Having Jurisdiction must be involved in the collaboration. Intervention could include

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**Strategic Goal 8-continued**

collaboration with the U.S Fire Administration, National Fire Incident Reporting System (NFIRS)

**Activity/Output Goal 8.2.1:** Develop new tools, resources, and documents to help small manufacturing businesses recognize and control hazards.

**Comment:** The majority of small businesses do not have full-time EHS staff to assist in understanding combustible dust fire and explosion hazards in addition the regulatory requirements. The NIOSH National Manufacturing Agenda can assist in developing educational resources for small businesses concerning combustible dust fire and explosion hazards.

**Activity/Output Goal 8.2.2:** Identify, disseminate, and promote the use of guidance documents and other resources with emphasis on company culture to assist small manufacturing businesses in assessing and prioritizing interventions in a cost-effective manner.

**Activity/Output Goal 8.2.3:** Work with standard setting organizations to develop standards scaled appropriately for small businesses that include health and safety considerations for procedures, methods, and equipment.

**Comment:** Authorities Having Jurisdiction, such as building inspectors, fire marshals, fire inspectors, insurance inspectors also must be involved in the identification, dissemination, and promotion of guidance documents and other resources

**Intermediate Goal 8.3:** Develop materials to disseminate interventions and research results on controls to small businesses.

**Activity/Output Goal 8.3.1:** Develop or improve intervention programs and practices to reach small businesses.

**Comment:** Primary intervention must also include educating local and volunteer fire departments in the identification of combustible dust hazards.

**Activity/Output Goal 8.3.2:** Evaluate programs to better understand best work practices in small businesses including company culture, job demand, control, management training, resources, etc.

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**Strategic Goal 8-continued**

**Activity/Output Goal 8.3.3:** Identify barriers and ways to overcome barriers to implementation of best practices in small businesses.

**Comment:** Barriers include lack of reporting procedures and follow-up of combustible dust related fires that fire department are repeatedly responding to. Fire departments must work closely with small businesses in preventing future incidents.

**Intermediate Goal 8.4:** Identify the needs, conduct outreach, and assist small businesses and sub-sectors.

**Activity/Output Goal 8.4.1:** Develop and evaluate outreach programs to small businesses.

**Comment:** Outreach programs must include many diverse stakeholders, such as local and volunteer fire departments, U.S Fire Administration, and Authorities Having Jurisdiction (AHJ)

**Activity/Output Goal 8.4.2:** Identify non-governmental organizations, trade groups or other organizations such as insurance carriers, State agencies, and Chambers of Commerce, that can serve as communications pathways to small businesses. (Coordinate with the NIOSH Small Business Assistance and Outreach Program).

**Comment:** Local and Volunteer Fire Departments can be utilized as a primary pathway in providing outreach to small business concerning combustible dust fire and explosion hazards. Fire departments are important pathways because they are the first responders repeatedly responding to combustible dust related fires (near misses), precursors to eventual combustible dust explosions.

**Activity/Output Goal 8.4.3:** Pursue and foster strategic partnerships to identify sub-sectors of small businesses with high injury and illness rates.

**Comment:** Manufacturing sub-sectors can be identified after incident data is compiled of combustible dust related fires that are occurring in the manufacturing sector.

**Activity/Output Goal 8.4.4:** Conduct outreach through the assigned risk pool businesses as administered by the states.

**Comment:** Working closely with insurance carriers, stakeholders can develop proactive layers of protection utilizing administrative and best engineering practices so as to prevent and mitigate combustible dust related fires and explosions

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**Strategic Goal 8-continued**

**Activity/Output Goal 8.4.5:** Pursue and foster partnerships with other agencies, such as the Manufacturing Extension Partnership program of the National Institute of Standards and Technology (NIST), leading to improvements in occupational safety and health in small businesses.

**Comment:** Partnerships must also be developed with the U.S. Fire Administration in the utilization of the National Fire Incident Reporting System (*NFIRS*) so as to understand the probability of occurrence concerning combustible dust related fires (near misses) and explosions

**Strategic Goal 9**  
**Emerging Risks**

**Strategic Goal 9:** Enhance the state of knowledge related to emerging risks to occupational safety and health in manufacturing.

**Comment:** Combustible dust related fires and explosions are a constant threat to national industries in the manufacturing subsectors that handle combustible particulate solids, which generate combustible dust.

**Intermediate Goal 9.1:** Utilize the NIOSH HHE program, REACH, EPA's HPV program, other sources of data, and innovative methods to collect and analyze data to identify, investigate, and track emerging risks – agents, processes, new technologies-associated health risks, potential hazards in the manufacturing sector, and new diseases in the manufacturing sector. Develop methods to communicate best practices and lessons learned.

**Comment:** Combustible dust related fires and explosions occur in the manufacturing sector on a regular basis. Currently there is no formal tracking of these incidents in understanding the probability of occurrence. Without the full knowledge of combustible dust incidents it is difficult to provide outreach and education to stakeholders so as to minimize the probability of future incidents.

**Activity/Output Goal 9.1.1:** Utilize the NIOSH Health Hazard Evaluation (HHE) program and other innovative methods to identify new agents, processes, or technologies that may pose hazards to occupational safety or health in the manufacturing sector.

**Comment:** The U.S. Fire Administration's National Fire Incident Reporting System (NFIRS) provides system resources and overview of the standard national reporting system used by U.S. fire departments to report fires and other incidents to which they respond and to maintain records of these incidents in a uniform manner.

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**Strategic Goal 9-continued**

**Activity/Output Goal 9.1.2:** Explore new sources of data and innovative methods for analyzing existing data to identify emerging occupational safety and health risks in manufacturing by specific sub-sector and occupation.

**Comment:** Obtaining information on combustible dust incidents through NFIRS in addition to news accounts will assist stakeholders in understanding the prevalence of combustible dust incidents.

**Activity/Output Goal 9.1.5:** Develop an innovative communication method (e.g., a moderated blog, a web-based diary, etc.) to capture dialogue around emerging science and policy issues regarding safety and health topics in the manufacturing sector.

**Comment:** In addition to a blog, mainstream media also needs to be educated on combustible dust related fires and explosions in the manufacturing sector. Many incidents are reported by media, yet the reporters are not aware that the incidents they are reporting on are combustible dust related.

**Strategic Goal 10  
Catastrophic incidents**

**Strategic Goal 10:** Reduce the number of catastrophic incidents (e.g., explosions, chemical accidents, or building structural failures) in the manufacturing sector.

**Comments:** Combustible dust explosions have catastrophic consequences and can be prevented through proper housekeeping.

**Intermediate Goal 10.1:** Disseminate and implement the surveillance findings to eliminate and prevent catastrophic incidents.

**Activity/Output Goal 10.1.1:** Define catastrophic incident, conduct surveillance, and collect data on catastrophic incidents in the manufacturing sector, including specifics on regulatory coverage.

**Comments:** In addition to catastrophic incidents, data on near missies, precursors to dust explosions, must be collected to prevent a catastrophic combustible dust explosion from occurring.

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**Strategic Goal 10-continued**

**Intermediate Goal 10.2:** Implement available practices, policies, and interventions to prevent explosions and structural failures.

**Comment:** Many combustible dust explosions occurred previously as combustible dust related fires. Minimizing the occurrence fires will assist in reducing the probability of explosions.

**Activity/Output Goal 10.2.2:** Evaluate the effectiveness of insurance audits/evaluations for catastrophic failures.

**Comment:** Insurance companies can assist business owners immensely in identifying combustible dust hazards in their audits. Do all insurance auditors have the skills and knowledge in identifying and understanding control measures in the prevention and mitigation of combustible dust relate fires and explosions?

**Activity/Output Goal 10.2.3:** Conduct global benchmarking comparing the effectiveness of various country- or region-specific regulations and corporate standards.

**Comment:** The European Union utilizes the ATEX Directives in preventing and mitigating combustible dust explosions. In the U.K., the DSEAR is the regulatory framework in the prevention of combustible dust explosions.

**Activity/Output Goal 10.2.5:** Validate, improve, and promote the use of root-cause analysis methods and techniques.

**Activity/Output Goal 10.2.6:** Develop and disseminate training and educational materials based on lessons learned from past experiences of catastrophic failures, common root causes, operations, hazards, and meta-analyses.

**Comment:** The Chemical Safety Board investigations and recommendations following several catastrophic combustible dust explosions can assist in educating stakeholders on the hazards of combustible dust.