



**U. S. Chemical Safety and Hazard Investigation Board**  
**RECOMMENDATION STATUS CHANGE**  
**SUMMARY**

<b>Report:</b>	AL Solutions Fatal Dust Explosion
<b>Recommendation Number(s):</b>	2011-3-I-WV-R1 2011-3-I-WV-R2 2011-3-I-WV-R3 2011-3-I-WV-R4
<b>Date Issued:</b>	July 16, 2014
<b>Recipients:</b>	AL Solutions, Inc. and AL Solutions, Inc., Burgettstown, PA facility
<b>New Status:</b>	R1: Open – Unacceptable Response/No Response Received R2: Open – Unacceptable Response/No Response Received R3: Open – Unacceptable Response/No Response Received R4: Open – Unacceptable Response/No Response Received
<b>Date of Status Change:</b>	December 13, 2019

**Recommendations Text:**

**AL Solutions, Inc.**

**CSB Recommendation No. 2011-3-I-WV-R1**

*For all new and existing equipment and operations at AL Solutions facilities that process combustible metal dusts or powders, apply the following chapters of NFPA 484-2012, Standard for Combustible Metals:*

- *Chapter 12, Titanium*
- *Chapter 13, Zirconium*
- *Chapter 15, Fire Prevention, Fire Protection, and Emergency Response*
- *Chapter 16, Combustible Metal Recycling Facilities*

**CSB Recommendation No. 2011-3-I-WV-R2**

*Develop training materials that address combustible dust hazards and plant-specific metal dust hazards and then train all employees and contractors. Require periodic (e.g., annual) refresher training for all employees and contractors.*

**AL Solutions, Inc., Burgettstown, PA facility**

**CSB Recommendation No. 2011-3-I-WV-R3**

*Prohibit the use of sprinkler systems and water deluge systems in all buildings that process or store combustible metals.*

**CSB Recommendation No. 2011-3-I-WV-R4**

*Conduct a process hazard analysis as defined in NFPA 484-2012, Section 12.2.5, and submit a copy to the local fire department or the enforcing authority for the fire code.*

**Board Status Change Decision:**

A. Rationale for Recommendation

On December 9, 2010, a metal dust explosion and fire occurred at the AL Solutions, Inc. (AL Solutions) facility in New Cumberland, West Virginia, which resulted in three employee fatalities and one contractor injury, and ultimately caused the shutdown of the plant. Pursuant to its investigation, the U.S. Chemical Safety and Hazard Investigation Board (CSB) found that AL Solutions did not follow the requirements of the prevailing national consensus standard, the National Fire Protection Association's NFPA 484: *Standard for Combustible Metals*, in order to control combustible metal dust hazards. The CSB also found that AL Solutions did not sufficiently train employees in combustible metal dust hazards.

Following the 2010 incident, AL Solutions constructed a new manufacturing facility in Burgettstown, Pennsylvania. CSB issued two recommendations to AL Solutions, as well as two recommendations specifically to the Burgettstown, Pennsylvania facility in order to prevent a similar incident at the new facility.

B. Response to the Recommendation

While AL Solutions stated that they implemented the recommendations, they were not responsive to multiple requests over the course of five years to provide documentation demonstrating the actions that were taken.

Solely as a courtesy to AL Solutions, the CSB intends them 90 days from the date of the Board Vote on this status change to provide the requested information. If they are unresponsive, the Board will close these recommendations as "unacceptable."

C. Board Analysis and Decision

Due to the information above the Board voted to change the status of CSB Recommendation Nos. 2011-3-I-WV-R1 through R4 to: "Open-Unacceptable Response/No Response Received."