



**National Fire Protection Association**

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**MEMORANDUM**

**TO:** NFPA Technical Committee on Handling and Conveying of Dusts, Vapors, and Gases

**FROM:** Joanne Goyette

**DATE:** December 12, 2011

**SUBJECT:** Supplemental Ballot on NFPA 654 Report on Comments (A2012)

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Attached please find a Supplemental Letter Ballot and Comment on NFPA 654-24 Log #CC5. This attached supplemental ballot item represents a correction to an inadvertent error in reporting of the original ballot comment.

Due to time constraints, please complete and return your ballot as soon as possible but no later than **Thursday, December 15, 2011. Your cooperation in meeting this deadline is greatly appreciated.**

Please return the ballot to Joanne Goyette either via e-mail to [jgoyette@nfpa.org](mailto:jgoyette@nfpa.org) or via fax to 617-984-7110. You may also mail your ballot to the attention of Joanne Goyette at NFPA, 1 Batterymarch Park, Quincy, MA 02169.

The return of ballots is required by the Regulations Governing Committee Projects.

**Attachments:**

**Comment**  
**Letter Ballot**

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654-24 Log #CC5 CMD-HAP  
(6.2.3)

Final Action: Accept

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**Submitter:** Technical Committee on Handling and Conveying of Dusts, Vapors, and Gases,

**Comment on Proposal No:** 654-25

**Recommendation:** Revise as follows:

6.2.3 Use of Separation.

6.2.3.1 Separation shall be permitted to be used to limit the dust explosion hazard or dust flash fire hazard area where supported by a documented engineering evaluation acceptable to the authority having jurisdiction.

6.2.3.1.1 The required separation distance between the dust explosion hazard or flash fire hazard area identified in 6.1 and surrounding exposures shall be determined by an engineering evaluation that addresses the following:

- (1) Properties of the materials
- (2) Type of operation
- (3) Amount of material likely to be present outside the process equipment
- (4) Building and equipment design
- (5) Nature of surrounding exposures

6.2.3.1.2 The separation area shall be free of dust or where dust accumulations exist on any surface, the surface colors below shall be readily discernible.

6.2.3.1.3 When separation is used to limit the dust flash fire or dust explosion hazard area determined in 6.1, the minimum separation distance shall not be less than 35 ft (11m), consistent with NFPA 51B, *Standard for Fire Prevention during Welding, Cutting, and other Hotwork*.

6.2.3.2\* When separation is used, housekeeping, fixed dust collection systems employed at points of release, and compartmentation shall be permitted to be used to limit the extent of the dust explosion hazard or flash fire hazard area.

A.6.2.3.2 The assertion of separation must recognize the dust accumulation on all surfaces in the intervening distance, including floors, beam flanges, piping, ductwork, equipment, suspended ceilings, light fixtures and walls. Process equipment or ductwork containing dust can also provide a connecting conduit for propagation between accumulation areas. The National Grain and Feed Association study [A] has shown that a layer as thin as 1/100 inch is sufficient to propagate flame in a limited expansion connection, such as an exhaust duct or a hallway. In the subject study the flame propagated for at least 80 feet.

[A] Tamanini, F., "Dust Explosion Propagation in Simulated Grain Conveyor Galleries," ESV-83-067, National Grain and Feed Association Fire and Explosion Research Report, prepared by Factory Mutual Research Corporation, Norwood, MA, July 1983.

6.2.3.3 Where separation is used to limit a dust explosion hazard or dust flash fire hazard area, dust thresholds in Section 6.1 shall be determined for this limited area such that the parameter,  $A_{\text{floor}}$ , in the equations is consistent with the limited area under consideration.

**Substantiation:** This update to the revisions to Section 6.2 introduced at the ROP stage, are required to make this section consistent with the updated changes to Section 6.1 made by Comment 654-16 (Log# CC3) and the introduction of the four methods for determining that a hazard exists in terms of dust flash fire or dust explosion hazard areas. Paragraph 6.2.3 was modified to clarify the use of separation within the standard.

The proposed revision of 6.2 presented in this Committee Comment also reflects the Committee's action in the TIA 1020 to the 2006 edition of NFPA 654 that was issued by the Standards Council March 1, 2011 (see Decision D#11-4).

**Committee Meeting Action:** Accept