

**U.S. Chemical Safety and  
Hazard Investigation Board**

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Board Member

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Board Member



**In reply, please refer to  
2006-02-I-DE-R7**

November 9, 2006

Mr. Donald S. Jones Sr., CSP, P.E.  
President  
The American Society of Safety Engineers  
1800 E Oakton St  
Des Plaines, IL 60018

Dear Mr. Jones:

As you know, the U.S. Chemical Safety and Hazard Investigation Board (CSB) conducted an investigation into the November 5, 2005, nitrogen asphyxiation incident at the Valero Refinery in Delaware City, Delaware.

Based on its investigation, CSB recommended that the American Society of Safety Engineers:

*Revise Safety Requirements for Confined Spaces, ANSI/ASSE Z117.1 to emphasize that:*

- *An oxygen-deficient atmosphere rapidly overcomes the victim.*
- *There is no warning before being overcome.*
- *An oxygen-deficient atmosphere might exist outside a confined space opening. (2006-02-I-DE-R7)*

The Board would appreciate a response from you regarding the actions taken or contemplated concerning these recommendations within 60 days from the date of this letter. The CSB assigns a status to recommendations from its investigations depending on the action(s) proposed and taken by recipients. The status designates the recommendation as either open or closed, and may also include a special designation for those instances when the Board concludes that a recipient not only meets but exceeds the proposed action(s). In order to assign status, the CSB requires evidence for action(s) planned or

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taken. The status of all recommendations are posted on our website. More information on the recommendation process and the investigation can be found on the CSB website at [www.csb.gov](http://www.csb.gov).

The CSB is also interested in tracking actions that result from its recommendations, as well as actions that the American Society of Safety Engineers may have already taken to address these issues. CSB recommendations are important to the protection of workplace health and safety

CSB is an independent and scientific Federal agency authorized by section 112(r) (6) of the Clean Air Act, 42 U.S.C. § 7412. CSB's mission is to ensure the safety of workers and the public by preventing or minimizing the effects of chemical incidents. The Board is responsible for determining the root and contributing causes of incidents, issuing safety recommendations, studying chemical safety issues, and evaluating the effectiveness of other government agencies involved with chemical safety. Congress modeled CSB after the National Transportation Safety Board, which investigates aircraft and other transportation accidents for the purpose of improving safety.

**Please refer to recommendation number 2006-02-I-DE-R7 in your reply.** If you have any questions or need further information, contact Hillary Cohen, Recommendations Specialist, at (202) 261-3601. Thank you.

Very truly yours,



Carolyn W. Merritt  
Chairman / CEO