



## U. S. Chemical Safety and Hazard Investigation Board RECOMMENDATIONS STATUS CHANGE SUMMARY

<b>Report:</b>	<b>Sterigenics Ethylene Oxide Explosion</b>
<b>Recommendation Number:</b>	<b>2004-11-I-CA-R8</b>
<b>Date Issued:</b>	<b>March 30, 2006</b>
<b>Recipient:</b>	<b>California Occupational Safety and Health Administration (Cal/OSHA)</b>
<b>New Status:</b>	<b>Closed- Acceptable Action</b>
<b>Date of Status Change:</b>	<b>February 14, 2013</b>

### Recommendation Text:

*In collaboration with other state/regional agencies as necessary, such as California Environmental Protection Agency, identify the ethylene oxide sterilization facilities in California that utilize oxidizing emissions control devices and conduct inspections of those facilities (including the Sterigenics Ontario facility) in terms of the findings of this report. Ensure prompt correction of all violations identified during these inspections.*

### Board Status Change Decision:

#### A. Rationale for Recommendation

The recommendation was issued pursuant to the CSB's investigation of the August 19, 2004 ethylene oxide explosion at the Sterigenics International, Inc. ethylene oxide (EO) sterilization facility in Ontario, California. The CSB found that plant maintenance personnel bypassed safety devices, allowing flammable ethylene oxide to travel through the ventilation system to an open-flame catalytic oxidizer, an emissions control device, triggering a large explosion. With more than 5,000 lbs of ethylene oxide on site, this facility was subject to the OSHA Process Safety Management (PSM) standard, which is enforced in California by the California Occupational Safety and Health Administration (Cal/OSHA). The CSB issued this recommendation to prevent similar incidents at California EO sterilization facilities.

#### B. Response to the Recommendation

Cal/OSHA informed CSB that they identified three California ethylene oxide facilities meeting the PSM threshold, including the Sterigenics Orlando facility and found that all three had interlocks and other safety devices in place. The CSB brought two additional facilities to the attention of Cal/OSHA; Cal/OSHA evaluated these facilities and determined they also had "taken appropriate measures to prevent this type of explosion from occurring."

#### C. Board Analysis and Decision

Because Cal/OSHA identified and inspected ethylene oxide sterilization facilities within the state of California pursuant to the findings of CSB's report, the Board designated this recommendation with the status "Closed- Acceptable Action."