# Chemical Safety and Hazard Investigation Board

OFFICE OF GENERAL COUNSEL

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Memorandum

To: Board Members

From: Richard C. Loeb

Cc: Leadership Team
Mark Kaszniak
Christina Morgan

Subject: Board Action Report – Notation Item 2013-13

Date: February 26, 2013

On January 30, 2013, the Board approved Notation Item 2013-13, thereby designating Recommendation 2004-02-I-AZ-R13, to the Maricopa County Air Quality Department (from the DPC Enterprises investigation), with the status of Closed – Acceptable Action.

## Voting Summary – Notation Item 2013-13

**Disposition: APPROVED**

**Disposition date: January 30, 2013**

| | Approve | Disapprove | Calendar | Not Participating | Date |
|---|---|---|---|---|---|
| **R. Moure-Eraso** | X | | | | 1/28/2013 |
| **M. Griffon** | X | | | | 1/30/2013 |
| **B. Rosenberg** | X | | | | 1/30/2013 |

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

| | |
|---|---|
| **Report:** | **DPC Enterprises (Glendale) Chlorine Release** |
| **Recommendation Number:** | **2004-02-I-AZ-R13** |
| **Date Issued:** | **February 28, 2007** |
| **Recipient:** | **Maricopa County Air Quality Department** |
| **New Status:** | **R13: Closed-Acceptable Action** |
| **Date of Status Change:** | **January 30, 2013** |

**Recommendation Text:**

*Revise DPC's permitted operating conditions to specify a minimum scrubber caustic concentration of 8 percent or more, as determined by laboratory measurement, with measurements taken daily and upon completion of each scrubber batch.*

**Board Status Change Decision:**

A. Rationale for Recommendation

On November 17, 2003, a chlorine gas release of up to 1,920 pounds at DPC Enterprises in Glendale, Arizona, led to the evacuation of 1.5 square miles of Glendale and Phoenix. Five residents and 11 police officers sought medical attention for symptoms of chlorine exposure and were treated and released.

DPC Enterprises, L.P. owns and operates a number of chlorine repackaging facilities around the United States. The Glendale facility operations received liquid chlorine from railcars and repackaged it into smaller containers to distribute to local customers. The facility would also manufacture sodium hypochlorite (or bleach) in scrubbers, which are otherwise primarily used as pollution control devices to capture chlorine emissions. It was in the scrubber that the CSB investigation determined that a decomposition reaction occurred, leading to the major chlorine release (i.e., an "over-chlorination event").

Among numerous other findings, the CSB concluded that insufficient safety margins, lack of engineering safeguards and unclear procedures and training contributed to the incident. The CSB issued fourteen recommendations, one of which went to the Maricopa County Air Quality Department (MCAQD), which administers the air pollution control permit program under the authority of federal EPA in Glendale, Arizona.

The Agency issued a permit to DPC as a non-major source of chlorine emission[1]. The permit, however, did not address the potential hazards of decomposition reactions in the scrubber that were capable of causing major releases of highly hazardous chlorine, as in the November 17, 2003 incident. Therefore the CSB issued a recommendation to MCAQD to revise the permit

[1] Non-major sources emit less than 10 tons per year of any single Hazardous Air Pollutant (HAP) and less than 25 tons per year of total HAPs. Chlorine was the only HAP permitted at the DPC Glendale site.

requirements to ensure a sufficient margin of safety to prevent the dangerous decomposition reaction from occurring.

B. Response to the Recommendation

MCAQD reported to the CSB that it had modified DPC's permit requirements to require the company to take measures to prevent a decomposition reaction in its scrubber. The new permit now requires a combination of both engineering and procedural controls intended to prevent an over-chlorination event from occurring.

C. Board Analysis and Decision

The Board reviewed MCAQD responses and documentation and found that MCAQD's actions are consistent with the intent of the CSB's recommendations. Therefore, the Board voted to designate Recommendation No. 2004-02-I-AZ-R13 with the status "Closed- Acceptable Action."