



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

<b>Report:</b>	Enterprise Pascagoula Gas Plant Explosion and Fire
<b>Recommendation Number:</b>	2016-02-I-MS-R2
<b>Date Issued:</b>	February 13, 2019
<b>Recipient:</b>	GPA Midstream Association
<b>New Status:</b>	Open – Acceptable Response or Alternative Response
<b>Date of Status Change:</b>	September 7, 2019

### Recommendation Text:

*Revise GPA Technical Bulletin: Brazed Aluminum Heat Exchangers, or develop a new bulletin, to incorporate the significant lessons learned from this incident, including but not limited to:*

- a. information on the potential of both minor leaks and catastrophic failure as a result of thermal fatigue;*
- b. clarification on the optimal placement of BAHX temperature and pressure sensors to better monitor operating conditions, including temperature rates of change; and*
- c. clarification on the need to safely vent layers that have been blocked off after interpass leak repairs, in all BAHX configurations.*

### Board Status Change Decision:

#### A. Rationale for Recommendation

On June 27, 2016, a major loss of containment (LOC) resulted in the release of methane, ethane, propane, and several other hydrocarbons at the Enterprise Products Pascagoula Gas Plant (PGP) in Pascagoula, Mississippi. The hydrocarbons ignited, initiating a series of fires and explosions, which ultimately shut down the site for almost six months. Two workers were on the night shift when the incident occurred and were uninjured.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) determined that the probable cause of this incident was the failure of a brazed aluminum heat exchanger (BAHX) due to thermal fatigue. The absence of a reliable process to ensure the mechanical integrity of the heat exchanger contributed to the catastrophic failure of the equipment. Given this information, the CSB issued three recommendations to GPA Midstream Association. This status change summary addresses **CSB Recommendation No. 2016-02-I-MS-R2**.

#### B. Response to the Recommendation

In May of 2019, the GPA Midstream Association informed the CSB that BAHX Workshop would begin work updating the technical bulletin no later than October 22-23, 2019, and should be completed by the following committee meetings, six months later.

C. Board Analysis and Decision

As the GPA Midstream Association confirmed its intentions to implement the CSB Recommendation and provided an approximate timeline for completion, the Board voted to change the status of **Recommendation No. 2016-02-I-MS-R2** to: “**Open--Acceptable Response or Alternative Response.**”