



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

Report:	Allied Terminals Fertilizer Tank Collapse
Recommendation Number(s):	2009-3-I-VA-R6
Date Issued:	May 27, 2009
Recipient:	Kinder-Morgan Liquid Terminals, LLC formerly Allied Terminals, Inc.
New Status:	R6: Closed – Acceptable Action
Date of Status Change:	September 30, 2013

Recommendation Text:

Hire a qualified independent reviewer to verify that maximum liquid levels for all tanks at Allied's Norfolk and Chesapeake terminals meet the requirements of American Petroleum Institute Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction. At a minimum, the review should verify that all requirements for welding, inspection of welds, and In-Service and Out-of-Service tank inspections are met. Make the complete review report for both terminals available to the Cities of Norfolk, Chesapeake, and Portsmouth, Virginia, as well as the Virginia Department of Environmental Quality.

Board Status Change Decision:

A. Rationale for Recommendation

On November 12, 2008 a two-million-gallon liquid fertilizer storage tank collapsed at the Allied Terminal, Inc. (ATI) distribution facility in Chesapeake, VA. The incident critically injured two contract workers, who were hospitalized. Two members of the public who tried to aid the injured men required treatment likely related to exposure to ammonia vapor from the released fertilizer. The fertilizer overtopped a containment dike and flooded sections of a nearby residential neighborhood. At least 200,000 gallons of spilled fertilizer could not be accounted for, and some reached the nearby Elizabeth River, which flows into the Chesapeake Bay.

As a number of different contractors had been involved in the inspection and repair of the aboveground storage tanks at the ATI Chesapeake and Norfolk terminals over the years, the CSB recommended that ATI hire a qualified independent reviewer to evaluate all the tank inspection data in order to verify that the maximum liquid fill levels had been calculated in accordance with the requirements of American Petroleum Institute Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction.

B. Response to the Recommendation

ATI responded to the recommendation by hiring an independent professional engineering firm to review the existing inspection and repair data and recalculate the maximum liquid levels for all tanks at the company's Chesapeake and Norfolk terminals. The firm issued a final report in April 2010 that verified that the maximum liquid levels for the tanks had been properly calculated in accordance with API Standard 653 requirements. In June 2013, the Chesapeake and Norfolk terminals were sold by ATI to Kinder-Morgan Liquid Terminals, LLC. Copies of this inspection

report were subsequently shared by Kinder-Morgan with all the named parties listed in the recommendation.

C. Board Analysis and Decision

As Allied Terminals hired a qualified independent reviewer to verify the safe liquid fill levels for its tanks at its Chesapeake and Norfolk terminals and copies of this report have been provided to the named parties listed in the recommendation by the new owner Kinder-Morgan, the Board voted to change the status of this recommendation to: "Closed – Acceptable Action."