

Facility	BP Texas, USA
Date	23 rd March 2005
Consequences	15 fatalities
Description of accident	<p>The incident occurred during the start-up of an isomerisation (ISOM) unit when a raffinate splitter tower was overfilled and over-heated. When liquid subsequently filled the overhead line, the relief valves opened. This caused excessive liquid and vapour to flow to blowdown drum and vent at top of the stack.</p> <p>An explosion occurred which killed 15 people and injured many others. All of the fatalities occurred in or near office trailers located close to the blowdown drum. Houses were damaged as far away as three-quarters of a mile from the refinery.</p>
Key Lessons Learnt [1]	<p>There are several major reports on the BP Texas accident which provide key lessons on the accident. The lessons outlined below are taken from the Baker Panel Report.</p> <ul style="list-style-type: none"> • A positive safety culture requires good process safety leadership. There should be a clear commitment to process safety by articulating a clear message on its importance and following through with related policies and actions. • An integrated and comprehensive process safety management system that systematically identifies, reduces and manages process safety risks should be established and implemented. • Personnel should have appropriate level of process safety knowledge and expertise. • A positive, trusting and open process safety culture that involves all relevant stakeholders should be developed. • There should be clearly defined expectations and accountability for process safety at all levels. • Leading and lagging indicators should be implemented, maintained and periodically updated for more effective monitoring of the process safety performance. • An effective system to audit process safety performance should be established and implemented.
Reports & Links	<p>1) Baker, J. et al., ‘The B.P U.S. Refineries Independent Safety Review Panel’, 2007</p> <p>2) Mogford, John et al., ‘Fatal Accident Investigation Report, Isomerization Unit Explosion Final Report, Texas City, Texas, USA, 2005</p> <p>3) US Chemical Safety and Hazard Investigation Board, ‘BP Texas City Refinery Explosion and Fire – Investigation Report’, 2007</p>