INVESTIGATING ACCIDENTS and INCIDENTS WITH A LOGIC-BASED PROCESS.
(Overcoming Organizational Barriers)

Richard F. Smullen, Jr. PE
106 Englewod
Bellaire, TX 77401
(713) 899-5613
rsmulle@aol.com

Abstract
The purpose of this paper is to share the experiences of the author in selecting and implementing a successful incident investigation process at a major petroleum refinery. The process, a simple logic-based tool, enables incident investigators, managers and workers to evaluate the facts of any incident and arrive at the consensus root causes. In addition, investigation teams were able to complete their investigations in considerably less time than with other processes.

The ultimate purpose of the investigation process is to prevent future reoccurrences of the incident. The investigation process has several aspects, including reporting the incident, gathering evidence or facts, interviewing involved parties, reporting findings, and taking corrective actions. This paper focuses on the critical thinking skill needed to evaluate facts gathered by the investigators and determine the root cause. Correcting root cause will almost always require some change in the management system. The barriers to change in any organization can be formidable. Therefore, the root cause analysis must recognize and be sensitive to these barriers to be successful.