

BP Texas City incident

Baker review

HSE has been asked, on occasions, what has it done to address the later recommendations coming from the US Baker and US Chemical Safety Board (CSB) reports into the incident at BP Texas City.

In response, we have answered that although many of the issues identified by Baker are not new and are already reflected in HSE's intervention strategies, there are a number of implications for HSE's regulation across the major hazard sectors. The US reports present a significant opportunity to engage an industry whose performance in risk management and control is not what it should be. We have grasped that opportunity, and have pushed the industry to improve its process safety management, to develop site specific lagging and, more importantly, leading indicators of process safety performance.

We are also organising the conference in April 2008 to provide a forum for 250 chief executives and other industry, regulatory, trade union and government leaders to discuss how top level commitment and leadership is essential in securing the strong, positive safety cultures, that are so important if major incidents are to be avoided.

The history

CSB's first ever urgent safety recommendation was issued to BP in August 2005, calling on it to convene an independent panel to assess safety culture and oversight at all five of its US refineries. The report of that panel is often referred to as the Baker Report.

In September 2005 BP agreed a list of corrective measures with OSHA, addressing over 300 alleged violations of OSHA safety regulations. BP paid OSHA \$21.3 million by way of a fine, but did not admit the alleged violations. In responding to the OSHA fine BP also explained that it had set aside \$700 million to compensate the families of those who died and those affected by the incident.

In October 2005 the CSB issued both a new urgent safety recommendation on the American Petroleum Institute to develop new safety guidance for placement of trailers, and preliminary findings as to the causes of the incident and recommendations to improve safety at similar sites.

CSB's final report was issued on 20 March 2007. It carried both specific and wider recommendations to prevent similar tragedies in the future.

In October 2007, BP agreed to pay an additional criminal fine of more than \$50 million for violations of federal environmental regulations in Texas. This is the largest criminal fine ever assessed against a corporation for Clean Air Act violations and the first criminal prosecution of the requirement that refineries and chemical plants take steps to prevent accidental releases. BP also pleaded guilty to a felony violation of the Clean Air Act and will serve three years of probation for the Texas City incident. BP is also required to complete a facility-wide study of its safety valves and renovate its flare system to prevent excess emissions at an estimated cost of \$265 million.

The Baker Report

This was commissioned by BP in response to the CSB recommendation. A panel, led by former US Secretary James Baker III, was appointed by BP Group Chief Executive John Browne in October 2005. The (BP US Refineries Independent Safety Review) Panel was established to make a thorough, independent and credible assessment of the company's five US refineries and of the company's corporate safety culture. The panel did not investigate the Texas City incident or any other past event.

The panel published its report on 16 January 2007. It identified material deficiencies in process safety performance at BP's US refineries, and called on BP to give process safety the same priority as BP has historically given personal safety and environmental performance. The panel made ten recommendations for improving BP's process safety leadership, systems, expertise and oversight of process safety performance.

CSB has commented that the report is the opportunity for review and reform on a worldwide scale. It has also commented that corporate leadership at the highest level is accountable for the safe operation of facilities that use hazardous chemicals, and the safety culture is created at the top – when it fails there it fails workers far down the line.

Specific recommendations from the Baker Report (paraphrased)

Recommendation 1: Process safety leadership BP top management must provide effective leadership and establish appropriate goals for process safety, articulating a clear message and matching with policies they adopt and actions they take.

- The panel recommends that BP set the tone at the top by setting expectations regarding process safety performance both in terms of verifiable objectives and means by which the company will achieve them.
- Appropriate adjustments to its performance contract system are recommended along with greater continuity of refinery plant managers and other refinery-level managers having significant process safety leadership roles.

Recommendation 2: Process safety management Establish and implement an integrated and comprehensive management system that systematically and continuously identifies, reduces and manages process safety risks.

Recommendation 3: Process safety knowledge and expertise Develop and implement a system to ensure that all levels of management possess an appropriate level of process safety knowledge and expertise.

- The panel recommends considerable stakeholder participation in the process. It is in effect asking for a complete competence assurance system for the organisation and its contractors that includes incident investigation and process hazard analysis techniques, and awareness training.

Recommendation 4: Process safety culture Involve the relevant stakeholders to develop positive, trusting, and open process safety culture within each refinery.

- The expectation is that this is done by participation in a climate that encourages it where unsafe acts can be reported and used to improve the way things are done. Control, communication and co-operation are mentioned.

Recommendation 5: Clearly defined expectations ... and accountability for process safety at all levels.

- The panel states plant manager commercial responsibilities should not take priority over safety and that performance contracts should reflect this. In addition, significant portions of the total compensation of managers and supervisors should be linked to meeting process safety performance indicators and objectives.

Recommendation 6: Support for line management

More effective and better coordinated process safety support for refinery line management.

- The panel recommends that a full time process safety leader be appointed at each refinery and that whilst line management will be to the refinery manager, who will retain responsibility for process safety, a functional reporting role to what is in effect a chief process engineer will be established reporting to head of safety and operations.

Recommendation 7: Leading and lagging process safety performance indicators

Develop, implement, maintain, and periodically update an integrated set of leading and lagging performance indicators for process safety both for its refineries and for more general use across the refining and chemical industry. Participation at all levels is required.

Recommendation 8: Process safety auditing Establish and implement an effective system to audit process safety performance.

- The process should include technically knowledgeable auditors that are properly trained. They should have substantial experience of the various elements of process safety management, refining technology, maintenance, and operations. Periodically, audit teams independent of BP should be used, and timely verification of remedial measures completed by personnel independent of the auditing team.

Recommendation 9: Board monitoring The Board should engage an independent monitor for at least five years to monitor the implementation of the recommendations and the ongoing process safety performance of BP.

Recommendation 10: Industry leader – BP should use the experience to transform the company into a recognised industry leader in process safety management.

Kevin Allars

Head of HSE's Chemical Industries Division
December 2007