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maintain the site over the next five years.

"The report clearly describes the underlying causes and management system failures which contributed to the worst tragedy in BP's recent history," said Ross Pillari, president of BP Products North America Inc. "We accept the findings, and we are working to make Texas City a complex that attains the highest levels of safety, reliability and environmental performance."

Some of the actions recommended by the investigation team have been completed. Many are underway. Texas City site manager Colin Maclean has established a special project team to plan and drive execution of the improvement program.

The company will install modern process control systems on major units, transition to a more powerful maintenance management system, improve worker training, remove blow down stacks and implement the other recommendations contained in the final report. The project team will also develop plans for reconfiguring and simplifying the operation of the Texas City refinery.

"The result will be a safe, reliable and highly efficient refinery capable of producing clean fuels that consumers are demanding," Maclean said.

In anticipation of a recommendation contained in the final report, BP has strengthened and changed the focus of its internal audit program to provide greater assurance that operations at Texas City and the company's four other U.S. refineries adhere to company standards.

The investigation team "found no evidence of anyone consciously or intentionally taking actions or decisions that put others at risk." However, "the team found many areas where procedures, policies and expected behaviors were not met."

According to the report, "the underlying reasons for the behaviors and actions displayed during the incident are complex and the team has spent much time trying to understand them. It is evident that they had been many years in the making and will require concerted and committed actions to address."

The final report confirms the critical factors which led to the explosion and greatly increased its consequences. Those critical factors were identified in an interim report published May 17. The final report also identifies the following underlying causes:

- \* Over the years, the working environment had eroded to one characterized by resistance to change, and lacking of trust, motivation, and a sense of purpose. Coupled with unclear expectations around supervisory and management behaviors this meant that rules were not consistently followed, rigor was lacking and individuals felt disempowered from suggesting or initiating improvements.
- \* Process safety, operations performance and systematic risk reduction priorities had not been set and consistently reinforced by management.
- \* Many changes in a complex organization had led to the lack of clear accountabilities and poor communication, which together resulted in confusion in the workforce over roles and responsibilities.
- \* A poor level of hazard awareness and understanding of process safety on the site resulted in people accepting levels of risk that are considerably higher than comparable installations. One consequence was that temporary office trailers were placed within 150 feet of a blowdown stack which vented heavier than air hydrocarbons to the atmosphere without questioning the established industry practice.
- \* Given the poor vertical communication and performance management process,

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there was neither adequate early warning system of problems, nor any independent means of understanding the deteriorating standards in the plant.

Prior to March 23, the leadership team at Texas City was working to address many of the problems later described in the final investigation report.

A control of work program had been started to ensure maintenance activities were safely performed. Training for supervisors was being improved. A program to implement a "Just Culture" in which people are held accountable for their job performance was getting underway. The workplace injury rate had been reduced by more than 70 per cent.

"We have recommended expansion, continuation and more rapid implementation of some initiatives already in progress at Texas City," said John Mogford, who led the investigation team and who serves as senior group vice president for safety and operations.

Maclean, who was named manager of the Texas City site May 17, has strengthened the leadership team at the refinery, bringing in new personnel from other locations in BP and reassigning others. He has simplified the organizational structure, clarified roles and responsibilities and put in place systems to improve communication and compliance with procedures.

"We are creating an environment in which people know that what they say matters, that they know what is expected of them and that they will deliver what is expected of them," Maclean said. "We must keep our promises to each other. It is the first step in rebuilding trust and the only way to earn the respect and obtain the commitment of a very skilled and very experienced workforce."

BP's incident investigation was conducted by a team of BP operations, refining and safety experts and salaried and union employees of the Texas City refinery. The team was directed to determine the cause of the March 23 explosion and make recommendations for preventing similar incidents in the future.

The final incident investigation report has been shared with government agencies investigating the incident and the findings and recommendations are being communicated across BP's global operations. As promised, the report is available to the public and has been posted on the web at [www.bpresponse.org](http://www.bpresponse.org).

### Notes to Editors

- \* BP has accepted responsibility for the March 23 explosion and for the management system failures and employee mistakes which contributed to or caused the explosion.
- \* The company has set aside \$700 million to compensate victims of the explosion and has worked to resolve claims arising from the incident. Settlements have been achieved with the families of most of the workers who died and with many workers who suffered serious injuries.
- \* BP has entered a settlement with the U.S. Occupational Safety and Health Administration resolving more than 300 separate alleged violations of OSHA safety regulations. BP paid a fine of \$21.3 million. The company agreed to a number of corrective actions, including the hiring and placement of process safety and organizational experts at the refinery. Under the agreement, BP does not admit the alleged violations or agree with the way OSHA has characterized them.
- \* BP continues to cooperate with the U.S. Chemical Safety and Hazard Investigation Board (CSB), the U.S. Environmental Protection Agency and the Texas Commission on Environmental Quality regarding the Texas City explosion and related concerns.

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- \* On the recommendation of the CSB, BP has voluntarily appointed an independent panel to assess and make recommendations for improvement of safety management and safety culture at the company's five U.S. refineries. Former U.S. Secretary of State James A. Baker is chairman of the panel.
- \* BP has endorsed a CSB recommendation urging the industry to revisit existing standards for the use of temporary buildings inside refineries and other processing plants. BP has established a new standard for its refining operations and plans to share it with others in industry.
- \* The Texas City refinery is owned and operated by BP Products North America Inc. It is BP's largest and most complex refinery with a rated capacity of 460,000 barrels per day and an ability to produce up to 11 million US gallons of gasoline per day.
- \* The Isomerization (ISOM) unit is used to convert raffinate, a low octane blending feed, into higher octane components for unleaded regular gasoline. The unit has four sections including a splitter which takes raffinate and fractionates it into light and heavy components. The splitter consists of a surge drum, fired heater reboiler and a fractionating column 164 feet tall (50 metres).

### Description of incident

The explosion and fire occurred after personnel responsible for the startup greatly overfilled the raffinate splitter tower and overheated its contents, which resulted in over pressuring of its relief valves.

Liquid was pumped into the tower for almost three hours without any liquid being removed or any action taken to achieve the lower liquid level mandated by the startup procedure.

The liquid level in the tower just prior to the loss of containment was at least 20 times higher than it should have been. Activation of the automatic liquid level control, as mandated in the startup procedure, would have prevented this occurring.

A decision late in the start up to begin removing liquid from the tower exacerbated the incident. Rapid heat exchange between the over heated liquid being removed from the bottom of the tower and the liquid feed continuing to flow into the tower (the two streams pass through a heat exchanger) caused significant vapor generation as the feed entered the tower. Vaporization of the liquid feed low in the tower pushed liquid up the tower and out of the unit, over pressuring the relief valves and ultimately overwhelming the adjacent blow down unit.

Based on process modeling, the investigation team estimates that about 1,100 barrels of liquid was discharged to the blow down unit which has a capacity of 390 barrels. Most of the liquid was released into the petroleum sewer system. An estimated 50 barrels overflowed the tower and led to the formation of a hydrocarbon vapor cloud at ground level.

Based on inspection of the sewer system and process and explosion modeling, the investigation team concluded that the sewers were not the primary route for the formation of the hydrocarbon vapor cloud that subsequently exploded. The damage observed to the sewer system was the result of secondary fires caused by the main explosion.

The source of ignition is not known.

Unit supervisors were absent from the scene during critical parts of the startup

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and unit operators failed to take effective action to control the process upset or to sound evacuation alarms after the pressure relief valves opened.

Critical factors

The final report confirms the critical factors which led to the explosion and greatly increased its consequences. Those critical factors, which were described in the interim investigation report issued May 17 are:

- \* The failure to follow procedures, leading to greatly overfilling the raffinate splitter tower
- \* Venting of liquids caused by overfilling and over heating of the liquid in the tower leading to a liquid relief to atmosphere and the subsequent explosion
- \* The location of many people too close to the source of relief (a blow down unit), congregated in and around temporary trailers which were inappropriately sited
- \* The continued use of a blow down unit for light-end hydrocarbon use when inherently safer options were available and could have been installed.

For further information contact:

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BP p.l.c.  
(Registrant)

Dated: 09 December, 2005

/s/ D. J. PEARL  
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D. J. PEARL  
Deputy Company Secretary