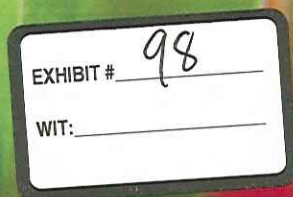


The BP Magazine

THE INTERNATIONAL MAGAZINE OF THE BP GROUP

ISSUE 3 2006



20 ALIEN NATION
Photography reveals
our underwater world

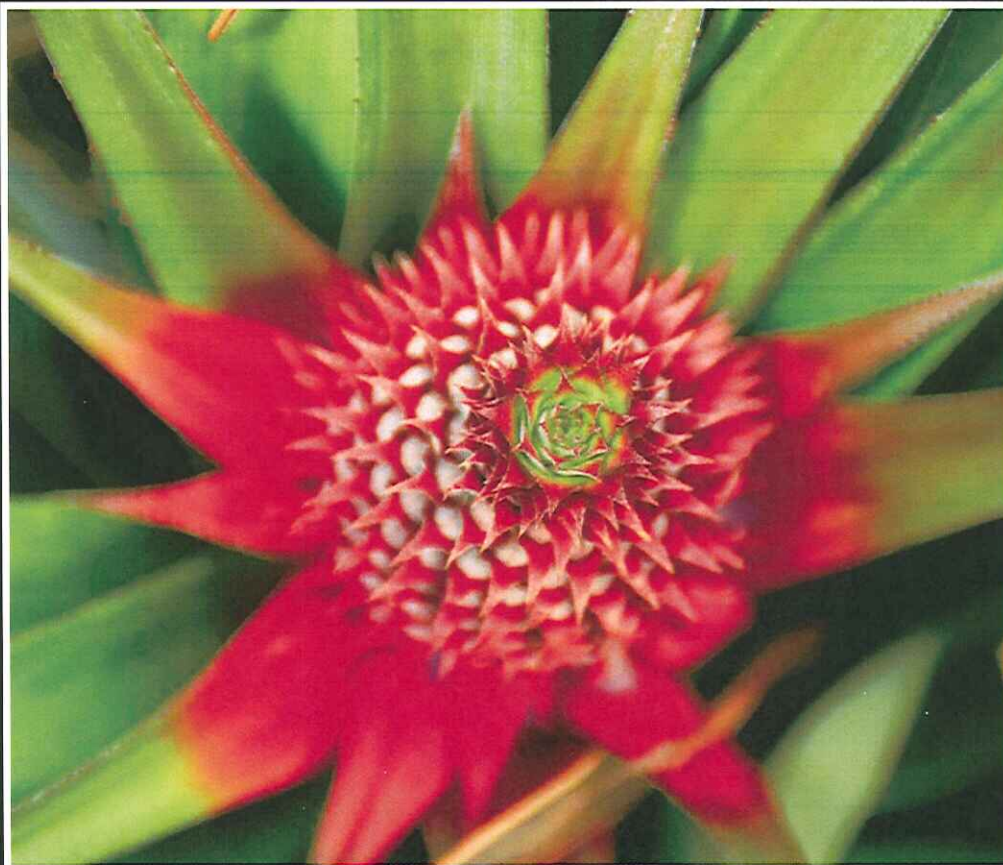
36 IT'S A GAS
The rise and rise of
BP's gas business

50 PICTURE PERFECT
BP Portrait Award
winners talk shop

Ripe for growth

The BP Magazine reports from Colombia where a new business-friendly climate is helping overcome some of the Latin American country's well-documented challenges.





COVER STORY

RIPE FOR GROWTH

A young pineapple represents a brighter future for Colombian fruit grower Florelda Rodriguez. *The BP Magazine* visits Colombia where BP's business and social agenda is thriving. Full report page 42.

THE BP MAGAZINE

The international magazine of the BP group
ISSUE THREE 2006

The BP Magazine is published for external readers around the world, as well as past and present BP employees. Its contents do not necessarily reflect official company views.

The copyright for photographs and illustrations in The BP Magazine is not always owned by BP. Please contact BP Photographic Services for details.

The BP Magazine was printed using vegetable based printing inks and low alcohol damping on press. The paper was manufactured using a elementary chlorine free process, sourced from sustainable forests and a mill accredited for EMAS ISO14001 and PEFC.

managing editor

Barbara Peen
peenb@bp.com

editor

Lisa Andrews
lisa.andrews@uk.bp.com

distribution

Carolyn Copland
+44 (0) 20 7496 4340

design

Phil Steed – Steed Design
phil@steeddesign.com

print management

Williams Lea

contributors

BP Imageshop
Eastwing
Getty Images
Nature Picture Library
Jupiter Images
Liddell Studio

BP p.l.c.

Chertsey Road
Sunbury-Upon-Thames
Middlesex TW16 7LN
United Kingdom
www.bp.com/bpmagazine

© BP p.l.c., 2006



Strategic view: BP's new approach to safety can be summarised by 3Ps – *Plant, Process and People*. The focus will be on all three areas being as equally safe as they can be.



Safety

THE NUMBER ONE PRIORITY

There's no doubt that the industry in which BP operates is challenging and hazardous. Keeping people safe is a daily issue, but the tragedy at Texas City – in which 15 people died – has thrown its ongoing importance into sharp relief. **Helen Campbell** discovers the impact it has had inside BP and how the company is working to ensure the lessons from that day are embedded right across the company.

Hydrocarbons are hazardous materials, and processing and production of them is a hazardous business. A key lesson of the investigation into Texas City is that we must pay more attention to process, as well as personal safety. Safe operations need safe plant, safe processes and safe people who are highly trained, skilled and motivated. Without all of these, safety can break down.

In its new strategic approach, summarised by the 3Ps – *Plant, Process and People* – BP is focusing equally on all three areas being as safe as they can be, whether that means plant design, the way a particular piece of equipment works or a task is carried out, or the capability of the person pushing the button.

As John Mogford, global head of Safety and Operations (S&O), puts it: "You might set out to drive safely, but if you do not know the highway code, or do not have a safe car, you are not a safe driver. In the same way, if people within our operations set out to be safe, but the plant



Right direction: road safety has been key to BP's operations for many years.

has problems, or work processes are incomplete and staff are not able or empowered to improve them, it is very difficult for the individual to be safe when the system around him is not."

Safety remains the number one priority, and while the concentration on personal safety will continue, BP's investigations show a need for closer attention from all of us to the risk of unlikely, but catastrophic, incidents. After first carrying out the most urgent item in its six-point plan – the immediate responses to the Texas City event – BP proceeded with the rest of the plan developed as a set of imperatives to streamline and improve safety standards across the group over the near future.

The second of these six points is a major accident review (MAR) of all global facilities or operations perceived to have high risk potential, requiring close scrutiny of plants and all their major risk activities. Half of BP's refineries and all its aromatics and acetyls sites have gone through the process, and BP will complete the review by the end of 2006.



"MAR looks at a very high level at layout and inter-linkage to risk and exposure to people," Mogford says. "This is a static process that augments other vital process risk procedures, such as HAZOP. It happens every five years and makes certain assumptions on performance. Then we carry out any major changes required as a result of the assessment, such as moving people or installing an extra piece of equipment."

BP will also closely examine its compliance with regulations, ensure closure of audit actions and invest in more staff safety training in the six-point agenda.

Longer term, the cornerstone is the Operating Management System (OMS),

aimed at streamlining global operational safety and ensuring consistent application of minimum standards of performance across the organisation, while taking into account local requirements. But it is not a quick fix, warns Mogford.

"We have to look at how we embed this through the right behaviour and the right performance management," he says.

"This is not a short-term change process or a piece of paper. It is about how we make our operations people understand more of the context, increase their awareness of inherent risk, empower them to continually improve what they do, and enable them to build their learning into the system for future use."

To achieve alignment through the businesses, safety culture needs to change. Texas City showed that inclusion counts, and that BP can benefit from more of it. For the leaders of BP's business segments and their teams, S&O's work has been making an impact for several months and further big changes are underway.

Says CJ Warner, group vice president of health, safety and environment (HSE) and technology for Refining and Marketing (R&M): "It is very important to think about the transformation that has taken place at Texas City [since the incident]. It started from a very challenging place, with a very demoralised workforce and a lot of concern."

»

"This is not a short-term change process or a piece of paper. It is about how we make our operations people understand more of the context, increase their awareness of inherent risk, empower them to continually improve what they do, and enable them to build their learning into the system for future use."

John Mogford

"Under the plant's new leadership, there is a tremendous cultural transformation, particularly focused on how everyone's knowledge and experience counts. We have learnt that we need to listen and to engage more, and to be more inclusive, so that everyone can have a voice and feel valued. That some of that was lacking has been a huge realisation from Texas City."

She continues, "We are committed to the OMS concept and have made it the cornerstone of a major project to improve process safety through implementation of OMS, beginning with our five US refineries."

"We feel the urgency of this in terms of the risks that refineries represent, and this is a positive response. OMS will take all the different standards and pull everything together into one comprehensive and holistic system, facilitating sharing of experiences and lessons."

One way that BP has increased inclusion is through additional safety-related questions in its internal People Assurance Survey (PAS), a measuring tool used every two years to seek the views of around 100,000 employees on a range of issues. For the first time, BP is using the answers to questions such as 'Do you feel your supervisor listens to you?' as benchmarks to determine opportunities to improve safety performance.

Cinzia De Santis, director of safety culture and leadership, has conducted extensive studies on the factors that contribute to safety performance, and says the link between safety records and the way employees feel treated by their supervisors – their well-being, satisfaction and confidence – is clear.

"Research shows that if individuals don't feel they are respected or listened to by their line supervisor, then they lose confidence in the system and then don't do what they should be doing," De Santis says. "We have learnt a lot from other industries, organisations and companies where the focus has been more on major accident risk, where confidence and trust are high, and sharing bad news is encouraged. The latter was not always the case in BP, where it is rare to hear a manager saying, 'Tell me something you know I don't want to hear about safety!' This is something we feel must change."

BP has conventionally measured safety performance in its individual businesses by the number of accidents leading to a 'day away from work' case, or DAFWC. These statistics are still being used but, as improvements in personal safety have been so great, they have become virtually meaningless over the past several years in

those businesses where the incident rate is extremely low.

"In the 1960s and 1970s, DAFWCs were useful because the injury rate in the industry as a whole was so much higher then," says De Santis. "But nowadays, from a statistical point of view, they don't make too much sense anymore and we are exploring other indicators, although we will always need to monitor DAFWCs."

BP's upstream business has also been applying the lessons from Texas City.

"Texas City had a big impact on us," says Ellis Armstrong, group vice president of technology and decentralised functions in Exploration and Production (E&P). "One of the first things we did was realise that it could happen to us. We immediately analysed high potential incidents in E&P and realised we had experienced a number of near misses that could have had a similar consequence to Texas City. As a result, we have fundamentally changed our approach to safety and operations, and that change is ongoing."

Mindful of the fact that fatalities at Texas City were higher because people

Constant dialogue: trust, confidence and dialogue are key to creating a culture of safety.





Field training: instructors and firefighting students learn about containing and extinguishing liquefied natural gas fires at the Brayton Fire Training Field, US.



“To improve our standards in safety, health, environment and technical integrity we have been recruiting people from outside BP, people who don’t think the way we normally do and who bring something new.”

Pat King

were in close proximity inside non-blast-proof temporary buildings (such as trailers), one of BP’s first responses was a thorough global review of all such buildings. Those in unsafe areas were either moved or made blast-proof. Armstrong cites the UK’s Wytch Farm oilfield as one E&P example where buildings were moved or upgraded as a direct result of Texas City.

“We also looked at the number of people who were in, or close to, hazardous areas and didn’t need to be,” he continues. “At the Kinneil processing terminal near Grangemouth in Scotland, where the Forties pipeline terminates, we have relocated office workers away from the hazardous area by moving them to the town.”

Offshore, the picture is slightly different. Owing to the fatal 1988 fire and explosion on a competitor’s North Sea platform named Piper Alpha, industry standards were tightened considerably. BP people offshore were largely already located away from high-risk areas, and where this was not the case remedial action has been taken, Armstrong says.

“Every part of our business is fully implementing the six-point plan, and our North American gas business will lead the transition to OMS.”

BP’s gas, power and renewables business also carried out a global survey of its operations. Steve Westwell heads up the Alternative Energy business and is also the segment’s representative to S&O.

“We have two areas of higher risk, our natural gas liquids (NGLs) business and our shipping fleet,” Westwell says. “Shipping has frequent and extensive external and internal safety audits and our NGLs business was a pilot in Project Emerald, the BP Group’s programme to ensure our businesses were in compliance with relevant legislation. In some respects,

we were in action on some of the issues we are now addressing at group level, but we are actively implementing the company’s six-point plan.”

One area of focus identified through Project Emerald was the inspection of pressure vessels, where we identified some which had not been inspected within the appropriate time frame. Plant turn arounds were scheduled for the relevant plants and vessels will be inspected and replaced where appropriate.

BP has always had capable people working to improve safety, environmental and health performance, but the shift in focus means a greater need for operational and process safety experts. Many have already been recruited externally, often from industries such as nuclear, pharmaceuticals and aviation.

“To improve our standards in safety, health, environment and mechanical integrity, we have been recruiting people from outside BP, people who don’t think the way we normally do and who bring something new,” says Pat King, head of HSSE at Texas City since January 2006. “We have brought in some very credible people who have a lot of expertise, who can build relationships, influence operations and maintenance managers and help make the right decisions.”

The accident at Texas City was a tragedy, but taking that experience and learning from it is the best tribute to those who lost their lives. John Mogford concludes: “We are a huge company and our scale is such that if we perform at industry average we will have a major incident once every 10 or 15 years, simply due to the number of refineries an oil and gas fields we have. But we need to be better than the industry average because none of us wants to accept such performance. Every fatality and every injury is avoidable, and is an incident which we cannot tolerate. That’s why we’re putting so much focus and energy into the safety and operations agenda across BP.”

Safety

Interview: John Mogford

Portrait photography by Graham Trott



"When I first heard about an explosion at a refinery in Texas City, my immediate thought was 'it won't be BP's, it must be someone else's plant'. You hope it has been a mistake and it's not BP. Of course – tragically – it was us. It was a sickening feeling, I was shocked."



No nonsense: with a background in drilling, John Mogford (left) is very experienced in the importance of safe practices.



The zero tolerance approach

John Mogford is a man with a mission. As BP's recently-appointed global head of Safety and Operations, he has been assigned to examine and reshape BP's approach to safety, health and environmental management. He talks to **Helen Campbell** about learning lessons and changing behaviours.

There is no doubt the tragic accident at BP's Texas City refinery on 23rd March 2005, shaking the company to the core, has been a watershed for the Group.

BP has learned many lessons from its investigations into the explosion which killed 15 workers and injured scores more. Its findings, plus investigations into recent leaks in Alaska's Prudhoe Bay pipeline, have led to a frank and thorough examination of BP's global approach to safety, operations, environmental management and technical integrity, and to the start of a long journey of transformation. The destination? A place where a tragedy such as Texas City will never happen again.

BP's approaches to dealing with the immediate aftermath of the accident and the longer-term consequences have been characterised by transparency and honesty. What better person, then, to head a company-wide effort to examine why Texas City and Prudhoe Bay happened, and how to avoid a reoccurrence of either, than John Mogford, a man with a history in safety at BP and wide experience from drilling to production?

Plain speaking, to the point, and with the crushing handshake of a man who means what he says and then does it, Mogford is far from uncomfortable in challenging the

convention and habit of BP's traditional approaches. Reporting directly to BP's chief executive Lord Browne, Mogford was appointed global head of Safety and Operations (S&O) in November 2005, with a remit to examine and reshape BP's operational approaches to safety, health, environmental management and operations integrity. A BP veteran with 30 years' service, Mogford is upfront about a shift in his own habitual feelings about safety at BP.

"When I first heard about an explosion at a refinery in Texas City, my immediate thought was 'it won't be BP's, it must be someone else's plant'," he says. "Of course – tragically – it was us. It was a sickening feeling, I was shocked. Then when I heard about [the] Buncefield [explosion] almost a year ago, I immediately thought, 'Oh no, that must be our terminal.'"

"I, in common I think with many others at BP, would not have thought like that before we experienced Texas City, because there was always a feeling that that kind of thing didn't happen to us."

Mogford previously served in senior leadership roles in BP's exploration and production, and gas, power and renewables businesses. His background in the hazardous environment of drilling, followed by a stint running the North Sea Forties field and then a move into HSE in the mid-1990s, has given him a broad perspective across the group. It is this,

and his forthrightness, which makes him the right leader of BP's self-examination.


The morning after the explosion, Mogford was asked to go to the US and lead the investigation. He remained in Texas City for nearly eight weeks, and in May 2005, BP published its first interim report. Realisation – and acceptance – that something along the line had failed was tough.

"Like most of us in the company, I was really proud of our historical progress," Mogford says. "Looking at industry benchmarking, we were close to the top of the pile in terms of personal safety performance, and then something like this happens and you start to ask how."

Mogford says that while BP's previous focus on increasing personal safety and reducing injury numbers across the group – in a plant, on a rig, in a service station or an office stairwell – has been vital, focus on safety at the core of BP's business, the production and processing of hydrocarbons, was less satisfactory.

"BP has been very dynamic, very growth-oriented in terms of business opportunities," Mogford says. "One conclusion I have come to though, is that we have not really recognised and respected enough the considerable knowledge and value of the people in operations, those at the heart of our business, in our oil and gas fields, in our refineries."

»



Tough climate: BP works in some of the most challenging areas of the world. Snow, wind, sea and desert all have to be dealt with in their own ways, always with safety at the forefront.



"Our improvement in personal safety statistics had maybe made us a little complacent. I do believe it is important that people wear their seatbelts, don't use their mobiles while driving, hold handrails and so on, because this is how people can be safer. But, clearly, holding a handrail does not prevent a pipe failure, for instance."

Nevertheless, Mogford continues, it is this kind of behaviour – getting people to follow rules by holding handrails or complying with driving standards – that he wants to see endemic in all areas of operations.

"People need to be aware that procedures are there for a reason and that following them is important. For example, a procedure is the way that up-to-date technical information gets built into day-to-day operations," he says. "If someone will take a risk by using a mobile while driving down the road, will they take a shortcut with maintenance?"

The shift to more closely integrate safety with operations will reach every employee involved with BP, including contractors.

"Some of the biggest barriers to safe operations are organisational and behavioural barriers, often exclusion in the biggest sense of the word," Mogford says. "Sometimes there is exclusion because people are contractors, or because they work in a different part of the organisation. We all have to believe and reinforce that everyone on our operations has an important role to play, and needs to be listened to and be part of the decision-making processes. With contractors, sometimes the commercial barriers get in the way, and we have to make sure they don't."

It can be the case in any industry that someone from central office is seen as an occasional hindrance, for whom things are tidied up, with whom promising but, meaningless words are exchanged, but who is never seen again. Mogford is well aware of the importance of making sure

people throughout BP know he means what he says, and of 'following up'.

"I try to interact at all levels," he says. "When visiting a refinery, I always try to go and visit the control room guys, as well as talk to the leadership team. I also spend a lot of time with the executive team in St James's Square in London, to try and get alignment from top to bottom. Whatever we say in the centre, if it doesn't help people who are conducting hazardous activities day-to-day in our plants, we have failed and have only a management piece of paper."

Texas City shook BP and people both inside the company and out. But it has made people re-examine how they work. For Mogford, this is an opportunity to achieve real, long-lasting and far reaching improvement so that plants, employees and anyone else working with BP, will be safer year on year.

"The impact of Texas City will be with us forever and, while we have got to move on, we will not forget it," Mogford says. "But we have to take the learnings and move forward, and we will not do that if we are harbouring the past. With time and reflection, we can concentrate on learning the bigger messages that impact the whole of BP, rather than those that impact just Texas City."

"Safety is not easy. In lots of bits of business, 80:20 is what you strive for, but in some of the things we do we have to be 100%. All of us need to have zero tolerance for that which undermines the core of what we do. There are no silver bullets. It is about deep-rooted rigour, completing what we start, listening to people who understand more than we do." **BPM**

● *Helen Campbell is a UK-based journalist specialising in energy, geopolitics, conflict and the environment. She was a staff journalist reporting on energy markets and corporate news for four years, and has worked on a freelance basis for the past six.*



"Some of the biggest barriers to safe operations are organisational and behavioural barriers, often exclusion in the biggest sense of the word. Sometimes there is exclusion because people are contractors, or because they work in a different part of the organisation."

