Delegates from Singapore companies can now enjoy the benefits under the ***Productivity and Innovation Credit (PIC) Scheme* plus cash bonus under ***PIC Bonus***!!** Please refer to terms and conditions below.

Process Safety Performance Indicators:

The health check of your Process Safety Management

Supporting safe and reliable production through effective Process Safety Performance Indicators (PSPI)

Kuala Lumpur, Malaysia • 26th - 28th August 2013

Course Facilitator:

Peter Wilkinson
Managing Director
Noetic Risk Solutions Pty Limited

Guest Speaker for the PROSAFE 2013 Conference held 20-21 June 2013 in Melbourne, Australia

- North Sea regulator - upstream oil and gas post Piper Alpha disaster
- Advisor to the US Government's Chemical Safety Board investigation team into the Macondo/ Deepwater Horizon disaster
- Downstream expertise as a member of the Caltex Australia Leadership Team - GM Operational Excellence and Risk
- Advisor to PTTEP and the Australian Government after the Montara blowout in 2009
- Peer reviewer in 2002 at the invitation of the Brazilian Government of the response to the Petrobas 36 sinking
- Testimony given to the public hearings in Houston into the Macondo disaster in November 2012
- Paper commissioned by the CSB on process safety indicators

Free Takeaway

Participants will receive:

- Noetic's White Papers
- Tools and Checklists
- Process Safety Indicators papers

Productivity and Innovation Credit (PIC) Scheme

- All business in Singapore can enjoy up to 400% tax deduction for external training* provided by UNI Strategic Pte Ltd for up to $ 400,000 for year of assessment 2013. You can enjoy up to 68% of tax savings from attending our trainings which means you only need to pay 1/3 of the course fees
- Alternatively, businesses can opt for a non-taxable cash payout option of 60% of up to $100,000 for year of assessment 2013 meaning up to a maximum of $60,000
  * This includes both trainings in Singapore and overseas
  * Both local and foreign employees are eligible
  * Course fees only

PIC Bonus (as announced in Budget 2013)

On top of the existing 400% tax deductions/ allowances and/or 60% cash payout ("PIC cash payout") under the PIC scheme, the PIC Bonus gives businesses a dollar-for-dollar matching cash bonus for YAs 2013 to 2015, subject to an overall cap of $15,000 for all 3 YAs combined. Businesses must incur at least $5,000 in PIC-qualifying expenditure during the basis period for the YA in which a PIC Bonus is claimed. The PIC Bonus is taxable.

Please refer to https://www.iras.gov.sg/irasHome/page04.aspx?id=14566 for more info

Testimonials from Peter's current and past clients:

"Peter Wilkinson conducted invaluable training for U.S. Chemical Safety Board (CSB) staff in conjunction with the inquiry into the Deepwater Horizon incident in the Gulf of Mexico. The CSB's investigation is the largest and most complex ever undertaken by the agency. Mr. Wilkinson's extensive history of leadership as a UK and later as an Australian safety regulator coupled with his oil industry management experience makes him uniquely qualified to provide training on topics such as process safety and the use of the safety case approach in major hazard operations"
- U.S. Chemical Safety Board (CSB)

"Over the last two years, we have used the services of Peter Wilkinson extensively. ROC (Bohai), has commissioned a piece of work around managing the barriers against major accident events, with Peter. We had a requirement to utilise an individual or company that could fit the following key requirements;

1. Familiar with current industry trends regarding asset integrity management practices and the role that "signals" play in identifying potential process safety hazards.
2. The role of effective communication in ensuring workforce involvement at all stages of the process
3. Current trends in effectively communicating the accountabilities for barriers against major accident events
4. A proven pedigree in the investigation and root causes of major accident events
5. Has detailed and extensive experience in hazard identification and risk management
6. Has extensive knowledge and experience in active monitoring systems

We have found Peter Wilkinson fits all the above and much more. He has a natural ability to share his experiences and insights in a manner that allows his audience to grasp complex incident scenarios and realise the significant role people play in stopping these events happening"
- ROC Oil

"Peter Wilkinson offers a unique experience blend - industry regulator, adviser to governments on Process Safety policy and legislation, and leader of process safety implementation at corporate executive level in the private sector. This breadth of experience provides Peter with capability to provide practical guidance to corporations and industry bodies who are ready to listen and act on his advice"
- An Australian upstream Oil & Gas company

Capitalise on the expert knowledge to gain maximum value on these vital issues:

- **REVIEW** the latest thinking on managing process safety
- **DEVELOP** process safety indicators which are relevant to your company and operation
- **GAIN INSIGHTS** from learning the inside story of how and why famous process safety incidents occurred as well as the learning from a series of less well known but equally important incidents
- **BENCHMARK** your organization's process safety maturity using a tool to assess organizational and human factors
- **ENHANCE** your own skills and knowledge on change management so you can be even more effective in your organization in promoting process safety
- **EXAMINE** how process safety is becoming a key Corporate Governance issue for the leadership teams of companies

UNI training courses are thoroughly researched and carefully structured to provide practical and exclusive training applicable to your organisation.
Benefits include:
• Thorough and customised programmes to address current market concerns
• Illustrations of real life case studies
• Comprehensive course documentation
• Strictly limited numbers

Proudly Organised by:

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Workshop Overview

Managing Process Safety is one of the most challenging aspects of achieving safe and reliable operations for any company working in oil and gas and chemical industries. Process safety incidents cost money, disrupt reliable operations but can also result in massive damage, loss of life and threaten the very existence of an organization. There is no evidence the frequency of serious process safety incidents are reducing.

This course, run by an internationally acclaimed process safety specialist and aimed at senior managers, production, reliability and safety specialists, will provide comprehensive coverage of process safety including underpinning theory, practical tools and processes, how to measure process safety and techniques to help you positively influencing colleagues within your company.

It will provide:

- ✓ A clear explanation of how the causation of **process safety** incidents differ from occupational health and safety accidents
- ✓ **Managerial strategies** to successfully manage process safety, including how focusing on risk controls can improve performance
- ✓ An explanation of the **cognitive biases** which affect supervisors and managers and which can inhibit effective management of process safety
- ✓ Practical tips for implementing **human factors improvements** to make it more likely critical procedures are followed by front line personnel
- ✓ The **strengths and weaknesses of the published standards** (eg API 754, HS(G) 254, OGP Report 456) for measuring process safety and how companies can develop effective measures specific to their organizations
- ✓ **Effective auditing** of process safety including human and organizational factors;
- ✓ **Change management techniques** safety and reliability specialists can deploy to improve the uptake of the above approaches to reduce the likelihood of process safety incidents, improve reliability
- ✓ **Effective Leadership** for process safety
- ✓ Process safety and enterprise risk management: What good looks like in **Corporate Governance**

The course will use **case studies** of real process safety incidents to illustrate the key concepts and delegates will be encouraged to share their knowledge of incidents for the benefit of the course.

PRE-COURSE QUESTIONNAIRE

To ensure that you gain maximum value from this course, a detailed questionnaire will be forwarded to you upon registration to establish your exact training needs and issues of concern. Your completed questionnaire will be analysed by the course trainer prior to the event and addressed during the event. You will receive a comprehensive set of course documentation to enable you to digest the subject matter in your own time.

In-House Training

Cost effective In-house courses, tailored specifically to your organisation's needs, can be arranged at your preferred location and time. If you would like to discuss further, please contact our In-house division at iht@unistrategic.com.

DAY 1 | 26th August 2013

SESSION 1: INTRODUCING PROCESS SAFETY

- Process Safety defined, (Process Safety, Asset Integrity, Performance Standards and Major Accident Events ,MAEs)
- Process Safety vs Personal Safety
- Measuring Personal Safety – LTIFR a critique
- **Case Study: Mumbai High Disaster 2005 – Theory into practice**

SESSION 2: PREVENTING PROCESS SAFETY

- Process Safety disasters: Theoretical Models on causation. "Swiss Cheese" and "Normal Accidents."
- What's a barrier? Identifying relevant process safety barriers
- How do barriers fail?
- Common Weaknesses in process safety programs
- Use and abuse of bowties
- **Case Study: Taking away the barriers one by one. Bass Straight platform fire**

SESSION 3: PROCESS SAFETY AND THE SERVICE MANAGEMENT SYSTEMS (SMS)

- Applying a complete Managerial Control System (MCS) approach to process safety
- MCS analyzed by comparing a global major's approach, a major international trade association and a respected regulators approach
- The MCS approach in practice to improve process safety
- **Case Study - Management of Change – insights from the MCS approach applied to MOC**

SESSION 4: PROCESS SAFETY INDICATORS

- Recent Developments in Process Safety
- Different Approaches to Process Safety Indicators, API (RP 754), OGP (Report 456) and UK HSE (HSG 254)
- Applying these approaches at the site and company levels
- Explaining why a single universal measure or indicator is so difficult

DAY 2 | 27th August 2013

SESSION 5: RISK ASSESSMENT AND ALARP

- Common Failures in Risk Assessment
- Risk Matrices and Cognitive Bias
- Involving the right people – Workforce Involvement
- What does ALARP mean in practice?
- **Case Study – Ship Collision and Riser protection**

SESSION 6: PROCESS SAFETY AND THE LIFECYCLE

- Design stage
- Construction and Commissioning
- Importing process safety risks – managing contractors
- Steady state production – process safety in shutdowns and turnarounds
- Legacy assets – old and ageing plant
- **Case Study – The Petrobas 36 Disaster**

SESSION 7: PROCESS SAFETY AND HUMAN FACTORS

- Improving understanding of Human Factors amongst line managers

- Cognitive Bias: “Framing errors”, “Confirmation bias” and the “Availability Heuristic”
- What are Procedures for? Reference documents, training aids, guides or mandatory rules?
- Practical improvements in Human Factors
- Human Factors in practice: **Case Study – The Viking Separator incident**

SESSION 8: ROLES AND RESPONSIBILITIES IN PROCESS SAFETY

- Measurement of process safety compared with Auditing
- Line Managers and Safety/Reliability Specialists
- Successful techniques for Involving the workforce
- Leadership in Process Safety – what “good” looks like

DAY 3 | 28th August 2013

SESSION 9: WORKSHOP: TECHNIQUES FOR IMPROVING PROCESS SAFETY INDICATORS IN YOUR COMPANY

- Change Management Theory and Practice
- Delegates to review measures, metrics and indicators currently in use in their company
- Design improvements to these measures
- Plan change management strategy to implement improvements

SESSION 10: INCIDENT INVESTIGATION

- Key components of an incident investigation process
- Incorporating human and organizational factors
- Providing feedback to managers
- Helping managers to avoid the “fundamental attribution error”

SESSION 11: GOVERNANCE, PROCESS SAFETY AND SHAREHOLDERS

- What do stock markets expect?
- Process Safety and its place in business Enterprise Risk Management
- Listing Rules and the duties of Directors and Officers
- Practical steps to improve interest and understanding of senior managers
- What can we expect in a post Macondo era?

SESSION 12: SUMMARY AND RECAP OF KEY CONCEPTS

- How process safety is different from personal safety
- The spin-off benefits to the bottom line of an effective approach to process safety by improving reliability
- The importance of “managing the risk controls/barriers” as opposed to just “risk management.”
- How to make changes in your organization

Program Schedule

(Day 1 - Day 3)

08:30	Registration
09:00	Morning Session Begins
10:40 - 11:00	Refreshments & Networking Break
12:45	Luncheon
14:00	Afternoon Session begins
15:30 - 15:50	Refreshments & Networking Break
17:00	Course Ends

WHY YOU SHOULD ATTEND

This is a rare opportunity to meet Peter Wilkinson and hear the inside story of some of the most significant process safety disasters in recent history including the Petrobras P36 sinking offshore Brazil, the Montara blowout in 2009 and the BP Macondo/Deepwater Horizon disaster in the Gulf of Mexico.

Peter is a former senior executive in Caltex Australia who has first-hand experience of managing process safety in an integrated downstream oil company including 2 refineries. Prior to that Peter was a regulator in the UK’s HSE Offshore Safety Division set up after the Piper Alpha disaster in the North Sea in 1988 and had particular responsibility to develop and implement the HSE’s approach to safety cases and safety management systems.

More recently he designed and built the Australian National Offshore Petroleum Safety Authority, (NOPSA – now NOPSEMA) and now consults globally to governments and companies on process safety, regulation and risk management. He is also a member of the Australian Government’s Nuclear Safety Committee.

Peter is a skillful trainer and facilitator and has a reputation for leading informative and enjoyable workshops. He is also a thought leader and his ideas and writings are widely respected. This is an unusual opportunity to work with Peter in developing and benchmarking your approach to process safety against a recognized global expert.

As a result of attending this course you will:

- ✓ Learn about the latest thinking on managing process safety
- ✓ Be able to develop process safety indicators which are relevant to your company and operation
- ✓ Have the opportunity to learn the inside story of how and why famous process safety incidents occurred as well as the learning from a series of less well known but equally important incidents
- ✓ Be able to benchmark your organization’s process safety maturity using a tool to assess organizational and human factors
- ✓ Develop your own skills and knowledge on change management so you can be even more effective in your organization in promoting process safety
- ✓ Hear how process safety is becoming a key Corporate Governance issue for the leadership teams of companies

WHO SHOULD ATTEND

This workshop is ideal for:

- ✓ Process Safety Engineers
- ✓ Process Engineers
- ✓ HSE Managers/Engineers
- ✓ Safety and Reliability Specialists
- ✓ Risk and Safety Consultants
- ✓ Maintenance Managers/Engineers
- ✓ Operation Technicians
- ✓ Government Regulators

Target Industries would include:

- ✓ Oil and Gas
- ✓ Chemical
- ✓ Power Generation
- ✓ Engineering
- ✓ Government- Health, Safety, & Environment

About your course facilitator

Peter is Managing Director of Noetic Risk Solutions where he focusses on providing strategic advice to Government, Boards and leadership teams on safety management and enterprise risk management with a particular focus on "Process Safety" or Major Accident Events in other words low probability but high consequence events.

Over the last 2 years, Peter has completed assignments for upstream oil and gas clients in Australia, (including BHP Billiton Petroleum, Origin and Woodside), China, UK, Malaysia, Timor Leste, New Zealand, and the US Gulf of Mexico as well as for the Australian Government on the Montara oilfield blowout. Peter is currently working for the US Federal Agency, the Chemical Safety Board (CSB) as an adviser to their investigation of the BP Deepwater Horizon disaster in the Gulf of Mexico. Peter is also a member of the Australian Radiation Protection and Nuclear Safety Agency's (ARPANSA) Nuclear Safety Committee

From 2005 to 2009 Peter was the Group Manager for Operational Excellence and Risk in Caltex Australia and a member of the Caltex Leadership Team. He oversaw the building of a process safety culture and the introduction of an enterprise wide risk management framework highly rated by McKinsey and Co for its approach to managing operational risks.

From 2001 – 2005, Peter was the principal "architect" for the development of the Australian National Offshore Petroleum Safety Authority, (NOPSA – now NOPSEMA). During this period, Peter was also an advisor to former premier Neville Wran during his review of mine safety in New South Wales, and with Andrew Hopkins advised the West Australian Government in their review of mine safety regulation. In 2002 the Brazilian Government invited him as a member of the International Regulators Forum (IRF) to review the revised regulatory system put in place following the loss of the Petrobras P36 floating production platform.

From 1991 - 2001 Peter worked in the North Sea for the UK's Health and Safety Executive, Offshore Safety Division regulating the offshore petroleum industry following the Piper Alpha disaster. This included work on developing the safety case regime. He also had responsibility for all onshore oil and gas exploration and production which included on one occasion attending a blow out of a coal seam gas well in the grounds of a hospital!

Selected Presentations and Papers by Peter Wilkinson

- ✓ "Safety Cases: Success or Failure?" Lecture at the National Research Centre for OHS, ANU, Canberra 15 May 2002.
- ✓ Creating a New Offshore Petroleum Safety Regulator, SPE, Offshore Technology Conference, Houston, 2003.
- ✓ Applying what we know about human error: from theory into practice, (co-authored with Elizabeth Grey), APPEA Conference 2004.
- ✓ Safety Case Regulation for the Mining Industry: Working Paper 37, (co-authored with Prof. Andrew Hopkins, Professor of Sociology, National Research Centre for OHS Regulation, Australian National University), July 2005
- ✓ Anglo American Risk Management Benchmarking Workshop, Hunter Valley 20 August 2007, "Best Practice in the Petroleum Industry."
- ✓ Annual Conference, WA Chamber of Minerals and Energy, Keynote address, "The Lessons from the BP Texas City Disaster," March 2008 Perth WA.
- ✓ Active Monitoring and Leadership (to prevent major accidents). Australian Petroleum Production and Exploration Association, (APPEA) August 2009, Perth WA.
- ✓ "Corporate Governance and Reputational Risk Management" Risk Management Symposium, Sydney, 21 April 2009.
- ✓ Managing Legacy Equipment in the Oil & Gas Industry, (co-authored with Tom Dreyer, RPS), APPEA 2010, Perth WA
- ✓ The barrier-based system for major accident prevention: a system dynamics analysis" (Hoffman and Wilkinson), delivered to the System Dynamics Society, Washington DC, USA 2011
- ✓ Progress on Process Safety Indicators Necessary but Not Sufficient? A discussion paper for the US Chemical Safety and Hazard Investigation Board, Houston, July 2012.
- ✓ "Macondo, Montara…no new lessons?" CHEMECA 2012, Wellington, New Zealand

Organizations that have benefited from Peter's expertise include:

- ✓ US Chemical Safety Board, advisor to the investigation team, BP Macondo disaster, Gulf of Mexico
- ✓ Caltex Australia
- ✓ ConocoPhillips, (in relation to Bayu-Undan production operations in Timor Sea)
- ✓ Brazil Government of the response to Petrobas 36 sinking
- ✓ Woodside Petroleum
- ✓ Roc Oil Bohai (offshore production operations in Bohai Bay, China)
- ✓ ANP Timor Leste, (National Petroleum Authority – 5 module training program)
- ✓ Origin Energy, Australia (process safety)
- ✓ BHP Billiton, (Australia and US Gulf of Mexico)
- ✓ Xstrata Coal
- ✓ New Zealand Government, High Hazards Unit, (upstream petroleum safety)
- ✓ Australian Department of Defence (risk management)
- ✓ Australian Government (in relation to PTTEP and the Montara blowout in 2009)
- ✓ Transfield Services, (process safety)