

**PIPELINE INDUSTRIES GUILD****ONSHORE TECHNICAL PANEL****MEETING OF 16<sup>TH</sup> DECEMBER 2008 HELD AT THE PIG'S OFFICES, BANBURY****KEY POINTS****1. ATTENDANCE****1.1 ATTENDEES (9 + 5 guests)**

Andrew JACKSON (Chair)  
 Roger SARGOLOGO  
 Brian SPENCER

Phil PARKINSON  
 Dick GRAY  
 Ernie HOLDEN

Ian HARRISON  
 Paul DOCHERTY  
 Graham DUNCAN

**GUESTS**

Aroon PALMER  
 Zhang ENBO

National Grid  
 Governmental Economy Consultant, People's Government of  
 Xinhua District, Cangzhou City, China

Song GUANGXIANG

Director General, Business Affairs Bureau of Xinhua District,  
 Cangzhou City, China

Cao ZHENJUN  
 Guo XUEYONG

President, Cangzhou Boda Petroleum Machinery Co. Ltd.  
 Vice General Manager, Cangzhou Dalipal Pipe Company.

**1.2 APOLOGIES (20)**

David YAPP  
 Russell DEARDEN  
 Cheryl BURGESS  
 Bruce McCULLOUGH  
 Richard ESPINER  
 Bill HUGHES  
 Mike DARRACOTT

Scott McCANN  
 Paul O'CONNELL  
 Simon TOMLINSON  
 Martin WAYLAND  
 Michael BOLAND  
 David WILLIS  
 John COPPACK

Graham WILCOCK  
 Wilson SANTAMARIA  
 Steve WHIPP  
 Mark JORDAN  
 Russell DEARDEN  
 Keith MOLE

**1.3 PANEL MEMBERSHIP / REPRESENTATION**

**Phil PARKINSON** had re-issued the revised skills matrix to all members of the Panel with his e-mail of 15<sup>th</sup> December 2008 for checking / completion. This would be re-issued with this meeting note as additional lines had been suggested and not all replies had been received.

In terms of possible visits in 2009, **Ian HARRISON** reported that after internal discussion in National Grid it was apparent that, whilst not impossible, a visit to a compressor station or LNG facility was fraught with difficulty as a trip around the site could not be guaranteed for a given day. This would be very much depend on how the site was being operated at the time. If a compressor station were running, for example, it would not be possible to see the engines, compressors etc.

He had secured a visit to National Grid's Pipeline Maintenance Centre (PMC) at Ambergate, Derbyshire on 30<sup>th</sup> June 2009. PMC is a heavy engineering centre providing engineering solutions in the field of pipeline intervention across the complete range of materials and pressures. This includes fabrication, pigging, emergency response to industry, etc.

After discussion, the kind offer to visit the PMC was accepted.

## 2. NOTE OF THE MEETING OF 9<sup>TH</sup> SEPTEMBER AT CORUS, HARTLEPOOL

The notes of the meeting (Rev 01) were agreed to be correct.

## 3. UKOPA UPDATE

**Wilson SANTAMARIA** had provided the notes of the most recent UKOPA meeting of 8<sup>th</sup> and 9<sup>th</sup> October 2008 – see Appendix 1 (below). These had been circulated with Phil PARKINSON's e-mail of 12<sup>th</sup> December 2008.

## 4. NATIONAL UNDERGROUND ASSETS GROUP (NUAG)

**Andrew JACKSON** said there was nothing to report on the work of NUAG in their development of a standard method of recording the location of buried services.

## 5. LINESEARCH

There was nothing to report other than that between 50,000 and 60,000 enquiries were being processed per month currently. The number of service companies included in the scheme was continuing to grow.

## 6. RECENT ACCIDENTS AND LESSONS LEARNED

### 6.1 Buncefield:

A fire began at the Buncefield Oil Storage Depot close to the M1 and about 25 miles north west of London at 06h00 on Sunday, 11<sup>th</sup> December 2005 after a series of explosions at the site. Local residents were evacuated, the M1 was closed twice and nearby offices and warehouses were badly damaged. The fire produced a black smoke cloud, which drifted at 9,000 feet and could be seen across much of South East England. The blaze was extinguished four days later.



The Environment Agency (EA) and the Health and Safety Executive (HSE) had brought prosecutions against five companies following the blasts in which more than 40 people were injured.

Criminal proceedings had begun against Total UK, Hertfordshire Oil Storage, British Pipeline Agency, TAV Engineering and Motherwell Control Systems 2003. The prosecutions followed a "thorough and complex" criminal investigation conducted by the two agencies which are jointly responsible for regulating non-nuclear hazardous industrial sites in Britain.

Total UK was facing three charges, of failing to ensure the safety of its employees, of failing to ensure the safety of people it did not employ, and of polluting ground water with fuel and firewater chemicals. Hertfordshire Oil Storage and the British Pipeline Agency were both charged with failing to take all the measures necessary to prevent a major accident and with polluting groundwater with fuel and firewater chemicals.

TAV Engineering was facing one charge of failing to ensure its employees were not exposed to health and safety risks, while Motherwell Control Systems 2003 faced one charge of failing to ensure people it did not employ were not put at risk. Details of the charges can be seen at the following website:

<http://www.buncefieldinvestigation.gov.uk/press/b08002.htm>

The initial court date for the case had been fixed for 23<sup>rd</sup> January 2009 at West Hertfordshire Magistrates' Court, Watford. The HSE and Environment Agency said they could not comment further on the decision to prosecute.

#### **6,2 Emsburen, Germany (October 26th 2007):**

**Ian HARRISON** reported on the findings of the investigation into the failure of a water bath heater. This had found there had been:

- A small gas leak from gas pipes in a water bath heater.
- Very small leakage caused little gas flow into the water of the boiler.
- The boiler was an open system which allowed pressure reduction over a valve into the atmosphere.
- As a consequence CO<sub>2</sub> leached out of methane to produce an acid base
- CO<sub>2</sub> corrosion started and reduced wall thickness of the tubes at the 6 o'clock position from 2.9 mm to 0.9 mm.
- Several tubes cracked and caused a chain reaction
- Bursting disk could not sufficiently reduce the boiler pressure
- Site was totally destroyed: however, there were no injuries
- National Grid's Standard Maint/2 Part 3 describes the routine check requirements and overhaul requirements.



**6.3 Wormington Compressor Station (UK):** Ian HARRISON referred to the failure of a section of pipe that was thought to have resulted from nitrogen purging using cryogenic liquid (though this was disputed by the purging contractor). This failure had resulted in the compressor station being decommissioned for a significant period.

## 7. LEGISLATION AND STANDARDS UPDATE

**Martin WAYLAND** (HSE) had written to advise that the revision of / amendment to the Pipeline Safety Regulations 1996 was very much on the cards with a timetable (possibly aspirational) for incorporating the revised regulations in the tranche of legislation to be made / enacted on 1 October 2009. If all goes to plan, the Consultation Document (incorporating the draft revised regulations / impact assessments / supporting guidance, etc) will be published towards the end of March 2009 and be subject to a 12-week consultation period. If there were any slippage in the timetable the regulations would have to be pushed back to 1st April 2010. [N.B. Under current rules, new or amended legislation can only be made on one of two days a year i.e. 1st April or 1st October.]

The proposal to extend the application of regulations 19 to 26 (i.e. provisions relating to Major Accident Hazard Pipelines, MAHPs) to include 'gasoline' by amending the description of dangerous fluids (to which Schedule 2 refers) stems from a number of sources, not least the reports of the Buncefield Major Incident Investigation Board. It is likely the proposal (including a definition of gasoline) will be incorporated in the Consultation Document.

**David WILLIS** had nothing to report regarding standards other than publication of following later this year or in early 2009 of:

*"Part 3: Steel pipelines on land – Guide to the application of pipeline risk assessment to proposed developments in the vicinity of major hazard pipelines containing flammables" – Supplement to PD 8010-1:2004.*

The BSi, in response to statutory requirements in connection with hazardous installations such as pipeline systems, had developed a supplement to the established design standard, BS PD 8010.

BS PD 8010 contains recommendations for, and guidance on, the design, selection, specification and use of materials, routing, land acquisition, construction, installation, testing, operation, maintenance and abandonment of pipeline systems constructed from steel. The standard is published as Part 1 for onshore pipelines and Part 2 for offshore pipelines and covers pipelines that are intended to carry oil, gas and other substances that are hazardous by nature of being explosive, flammable, toxic, reactive or liable to cause harm to persons or to the environment. The new Part 3 is a supplement to Part 1 and applies to pipelines on land.

Part 3 has been developed with in full co-operation with the Institute of Gas Engineers and Managers (IGEM) who will publish a similar supplement for use with their standard - IGE/TD/1 Edition 4: *Steel Pipelines For High-pressure Gas Transmission*.

The guidance in Part 3 was specific to the calculation of safety risks posed to developments in the vicinity of UK major accident hazard pipelines and is provided for the benefit of:

- Pipeline operators;
- Local planning authorities; and
- Developers and any person involved in the risk assessment of developments in the vicinity of existing major accident hazard pipelines.

It was based on the established best practice methodology for pipeline risk assessment, and is intended to be applied by competent risk assessment practitioners.

## 8. SEMINARS, CONFERENCES AND COURSES

## 8.1 REPORTS FROM RECENT CONFERENCES

**Wilson SANTAMARIA** reported that the most recent meeting of the Pipeline Operators' Forum (POF) – principally comprising European oil and gas pipeline operators – had been held at Dong Energy's Copenhagen offices in September 2008. The meeting evaluated the continuity of the forum's existing members who had not been participating and identified potential new members. Chevron Corporation stated their interest of being part of the forum. More active participation of the members was requested linked with having an agenda established for every year.

It was reported that in-line inspection vendors had developed better technologies and tools for pipeline inspection but existing specifications were far behind these developments. Un-pigable lines continued to be a big concern for all pipeline operators.

The Chairman of the POF, Peter VANDERVEER, presented the draft of the new POF specification. This had been modified and members were asked to submit their comments. Wilson had not yet received the minutes of the meeting or the final POF specification for approval.

## 8.2 OTHER REPORTS

No other reports were given.

## 8.2 FUTURE CONFERENCES / COURSES

No details were given.

## 9. PIG HQ ISSUES

No report was received from **Cheryl BURGESS**.

## 10. ANY OTHER BUSINESS

### 10.1 COMPETENCE MATRIX

The matrix was to be re-issued with this meeting note as additional lines had been suggested and not all replies had been received. It was hoped the details could be finalised as soon as possible.

### 10.2 ACOUSTIC DETECTION OF THRID PARTY INERFERENCE

**Aroon PALMER** of National Grid gave a presentation of the trial installation of GE PII's *ThreatScan* system at the AGIs on the Southern Feeder Pipeline that would be the subject of evaluation during early 2009.

## 11. NEXT MEETINGS

General dissatisfaction was expressed at both the standard of the facilities provided for the meeting in the PIG's new HQ and the difficulty experienced by all in finding the meeting room. This was felt to reflect badly on our hospitality for the Chinese delegation.]

It was planned that any future meetings in Banbury – that was agreed to be a good, central venue – should be held at the local offices of either RSK Carter Ecological or of Fisher German that were of a far better standard.

Concern was also expressed about sharing all meetings and the planned visit to the National Grid's PMC at Ambergate with the Utilities Panel. After discussion, it was agreed that – except for the December meeting – the Onshore Panel would hold their meetings separately from the Utilities Panel. **Phil PARKINSON** advised Jo PARKER (Chair of the Utilities Panel) of this decision on 6<sup>th</sup> January 2009.

The revised planned meeting dates and venues were set as follows:

**17<sup>th</sup> March 2009**

Meeting to be held at:  
RSK Carter Ecological Ltd  
Edmunds House  
40 The Green  
South Bar  
Banbury  
Oxfordshire  
OX16 9AE

Telephone: 01295 672970

**30<sup>th</sup> June 2009**

10h30 start for meeting and visit to National  
Grid's Pipeline Maintenance Centre,  
Ambergate

**29<sup>th</sup> September 2009**

Meeting at RSK Carter Ecological, Banbury

**15<sup>th</sup> December 2009**

10h30 start for joint meeting with Utilities  
Panel at RSK Carter Ecological, Banbury  
(followed by Christmas lunch)

[Unless stated otherwise, meetings will convene at 12h30 for sandwiches for 13h00 meeting start. The December meeting will start at 10h30 followed by the Christmas lunch.]

Phil PARKINSON  
19<sup>th</sup> January 2009  
(Rev 01)

END

## APPENDIX 1 – NOTES OF THE UKOPA MEETING OF OCTOBER 2008

### **SUMMARY NOTES OF THE UKOPA MEETING HELD AT NATIONAL GRID'S PIPELINE MAINTENANCE CENTRE, AMBERGATE, DERBYSHIRE ON 8<sup>TH</sup> AND 9<sup>TH</sup> OCTOBER 2008**

#### **1. Attendance**

The meeting was attended by 20 representatives of the UK pipeline operators association listed below, and by representatives of the HSE.

Shell UK Ltd.  
SABIC UK Petrochemicals.  
National Grid.  
Shell EPE.  
BPA.  
Esso Petroleum Co. Ltd.  
Scotia Gas Networks.  
Northern Gas Networks.  
Total UK Ltd.  
Centrica Storage Ltd.  
E-on UK Plc.  
BP .

Apologies were received from representatives of the following pipeline operators:

Wales and the West Utilities.  
BG Group.  
Ineos Manufacturing Scotland Ltd.  
BG Group.

#### **2. Presentations**

The following presentations were received:

- 2.1 Overview of the Ambergate Facility and the Pipeline Maintenance Centre Capabilities – Ken Fox National Grid.
- 2.2 Application of Environmental Risk Assessment – Professor Rod McConnell.
- 2.3 Digital Pipeline Routing – Wayne Shelley, HSL.
- 2.4 Learning from the 1989 Mersey Oil Spill – Roger Ellis.
- 2.5 Environmental Aspects of Pipelines – Andrew Gunning and Brendan McAndrew, RSK.
- 2.6 Pipeline Routes and Geographical Information Systems – Presentation by Wayne Shelley HSL, supported by Joe Januszewski, HSL.

The presentation by Ken Fox was followed by a guided tour of the Pipeline Maintenance Centre's facilities.

#### **3. Interactive DVD – Pipelines and Emergency Response**

An order has been place for the production of the interactive DVD and the final version will be presented to Members at the scheduled meeting in February 2009.

**4. Newcastle University – MSc Student Prize**

The UKOPA prize for the best student of the year is to be increased to £250 and arrangements are being made to install a plaque in the University to provide a permanent record of winners of the prize.

**5. H, S & E Issues and UKOPA Safety Alerts**

Additional safety alerts provided by Members since the last meeting were briefly reviewed. These are posted on the Members' section of the website.

A number of recent H, S & E incidents/near misses was shared.

**6. UKOPA Strategy**

Recent developments relating to the UKOPA strategy were reported by the Chairman. A copy of the most recent version is to be issued to the Management Council and Work Group Chairmen for review of deliverables and programmes. The strategy document is to be fully updated by the end of December and a copy will be posted on the public section of the website in place of the Work in Progress report.

**7. Reports from the Working Group Chairmen – Salient Points**

**7.1 Infringement Working Group (IWG)**

(i) The final versions of the Pipeline Awareness DVD, one for Utilities and Contractors and one for landowners and tenants, have been delivered and arrangements are in place for posting a copy of each on the public section of the Association's website.

(ii) 500 safety cards have been printed and are being tested by IWG Members. Feedback to be provided at the meeting in February 2009.

**7.2 Risk Assessment Working Group (RAWG)**

**(i) Integrity Assessment of Dents**

Newcastle University has been contracted to prepare practical guidance on the prioritisation of dents for investigation, assessment and repair for UKOPA members. This guidance is to be based on the report on dents already prepared for UKOPA by the University.

The need for a more detailed study of pipeline dents is to be reviewed following completion of the practical guidance work.

**(ii) Risk Assessment Methodology for Gas Compressor Stations**

The HSE is considering the need to develop a risk assessment methodology for gas compressor stations.

**(iii) Gasoline Pipelines**

The question of inner zones for gasoline pipelines was raised, and will be discussed at a separate meeting to be coordinated between the RAWG and the HSE.

**(iv) Ethylene Decomposition**

The paper prepared by Rod McConnell is to be reviewed by the ethylene pipeline operators following which it will be shared with the HSE.

### **7.3 Fault Database Management Group**

- (i) It is intended to formally publish fault statistics formally as a UKOPA document. A draft Report has been prepared and is currently being reviewed.
- (ii) UKOPA is working to include oil and gasoline operators in the pipeline fault database.

### **7.4 Emergency Planning Working Group (EPWG)**

#### **(i) Interactive DVD – Pipelines and Emergency Response**

An order has been place for the production of the interactive DVD and the final version will be presented to Members at the scheduled meeting in February 2009.

#### **(ii) PERO Courses**

Consideration is being given to organising four PERO refresher courses at the Fire Services College in 2009 with dates and costs to be confirmed. The EPWG is to seek nominations from Members in order to confirm the need and to enable costs and dates to be finalised.

### **7.5 Process Safety Work Group (PSG)**

The PSGW has identified pipeline process safety KPIs, and has developed an assessment and benchmarking model for use by UKOPA and these were presented at the meeting. The PSGW recommended that the model be developed into a web-based application with independent reporting and analysis facilities, and this was approved by Members.

### **8. Technical Seminar and the Seminar for 2009.**

The theme for the 2009 technical seminar is to be “Prevention and Management of Pipeline Damage”, and members were requested to consider and suggest topics for presentations. The seminar will be held at Eakring on the 9<sup>th</sup> June 2009.

### **9. Pipeline Rating 2010 Revaluation – UKOPA Involvement and Support**

All Members were requested to share any evidence that they might have relating to:

- (i) Evidence of pipeline market values.
- (ii) Evidence of material discounts based on quantity.
- (iii) Evidence of age related costs and comparables.

### **10. Agenda/Presentations for the February 2009 Meeting**

The theme will be “The UK Energy Infrastructure” and members and the HSE are invited to submit proposals for presentations.

### **11. Proposed Legislative Changes to PSR 1996 – Update and Discussion**

Publication of the Consultation Document is still planned for summer spring 2009, with a view to enacting the changes October 2009.

### **12. Actions Arising.**

Detailed list of actions arising from the meeting are available in the members section of the UKOPA website.

**13. Dates and Venues of Future Meetings**

25<sup>th</sup>/26<sup>th</sup> February 2009.

9<sup>th</sup> June 2009 – Technical Seminar.

7<sup>th</sup>/8<sup>th</sup> October 2009.

## APPENDIX 2 – BRIEF INTRODUCTION OF CANGZHOU CITY, XINHUA DISTRICT

Cangzhou City is located in the southeast of Hebei Province, within the Urban Agglomeration of Beijing, Tianjin and Hebei, and Bohai Rim Region. It is an hour of drive to Tianjin, two hours to Beijing. Cangzhou, the emerging city, has a total area of 50 sq km, with 600 thousand of population.

Xinhua District, where several provincial and ministerial level petrochemical enterprises located, such as SINOPEC—Cangzhou Branch—CHEMCHINA—the 13<sup>th</sup> Construction Company—Huabei Oilfield—the Second Department of Petrol, etc., is the major district of Cangzhou City. This city has witnessed the rapid development of backbone enterprises, including Cangzhou Dalipal Pipe Company—Huabei Petroleum Feida Co., Ltd—Cangzhou Huabei Petroleum Machinery Plant, etc. By far, it has preliminarily formed an industrial system, with petrochemical and petroleum equipments manufacturing as its leading sectors. Cangzhou Dalipal Pipe Company is a professional factory specialized in the R&D, manufacturing and selling of petroleum pipes. With total assets of 660 millions RMB, its capacity of petroleum casing pipes manufacturing ranks within the top four in the industry. In 2007, Dalipal produced 190 thousand tons of petroleum pipes, accomplishing 1.8 billion of production value, sales reached 1.5 billion yuan, export value 82 million USD. Cooperated with China University of Petroleum, Huabei Petroleum Feida Co., Ltd has been developing and producing series of camps for petroleum drilling use, selling to major oil fields inside and outside China. In 2007, its annual revenue amounted to 600 billion Yuan.

In 2009, the petroleum drill project and electric eddy brake project, which are invested 300 million and 200 million respectively, will be undertaken. We aim at constructing a fairly complete manufacturing center of petroleum equipments, with the expectation to invite European petroleum equipments manufacturing enterprises to conduct all-round cooperation with that of ours. Xinhua District Government of Cangzhou City will give you convenience, together with support.