

United Kingdom Onshore Pipeline Operators' Association

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Notes of Risk Assessment Working Group Meeting held on 5 October 2004 at Advantica's Offices at Loughborough

Present:-

Roger Ellis	-	Shell
Neil Jackson	-	Transco
Neil Macnaughton	-	BP
Richard Espiner	-	BP
Ken Thomas	-	Huntsman
Steve Chatfield	-	HSE
Jane Haswell	-	PIE
Rod McConnell	-	Independent Consultant

Apologies – Peter Davis

1 Notes and Actions from Last Meeting April 2004

The notes were correct, and actions covered by subsequent agenda items. One significant change is that the urgency to define the risk assessment methodology for gasoline pipelines is removed because HSE are not now progressing PSR changes which would have classified gasoline pipelines as Major Accident Hazard.

2 Update on ACDS WGP Activities

Jane Haswell described the current positive situation and the meeting to be held the next week (13 October). The outcome of the P5 meetings was still to be made known – WGP Chairman Prof. Gordon Walker was attending a meeting of the Project Board of the IFRULUP so the conclusions for pipeline risk assessment methodology should be known soon.

3 Comments on ALARP papers

Two papers (Drafts dated 30 July 2004) were circulated to the recent UKOPA meeting at Reading in September by Steve Chatfield of HSE, and UKOPA was requested to comment:-

- 1 “HSE Principle for Cost Benefit Analysis (CBA) in support of ALARP decisions”
- 2 “Cost benefit Analysis (CBA) Checklist”.

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The Risk Assessment Working Group were asked to review the papers and make comments. The comments are contained in a separate note.

4 Technical Work Programme

A Progress Report was presented to the September UKOPA meeting as circulated and agreed by the RAWG. A further more detailed update was discussed (see attached). Actions on the programme are now in progress.

Ground Movement – Huntsman reported on progress to evaluate areas of higher risk along the routes of their ethylene pipelines following an internal audit. They have engaged the British Geological Survey to carry out the work (similar to Transco work).

Mitigation methods – the next PIPESAFE group meeting is on October 20th – Neil Jackson invited Rod McConnell to attend.

Action - Neil Jackson agreed to describe Transco work on depth of cover mitigation work at next RAWG meeting.

5 Shell NWEF Road Crossing

Re-emergence of the possibility of the Ormskirk bypass re-opens the possibility of mitigation required to reduce the risk to a tolerable level, depending on the risk reduction factors accepted by HSE.

6 List of Planning Applications

Shell planning application problems now added to list.

Action – Rod McConnell to carry out analysis of applications for next meeting

7 AOB

In discussions concerning EC Directive, **Action** - Rod McConnell agreed to circulate a collation of the proposed Directive articles

8 Next Meeting

Next meeting will be at Newcastle University on Wednesday December 8th, following the presentation to the 2 top pipeline students on the Pipeline Engineering MSc course 2003-2004.

R A McConnell

Draft for Comment – 8 October 2004

RISK ASSESSMENT WORK GROUP - 4 October 2004
Technical Work Programme – Detailed Work Schedule

1 Failure Rate Contribution from Ground Movement.

- Transco evaluating the results of BGS Work to see how they can be incorporated into the Risk Assessment modelling for Land Use Planning Zones. **Neil Jackson**

2 Third Party Damage Predictive Model. (FDMG)

- Advantica have completed work to develop Limit State Functions for UKOPA. Draft report to be issued in October. “Look-up” tables for specific pipeline failure cases to be provided as an addendum. **Neil Jackson / Advantica**
- Meeting with Stuart Pointer to be set up to describe the work done and the new equations, and gain HSE acceptance / adoption. **Neil Jackson (to include Andrew Francis and Rod McConnell)**
- Publication in journals to be considered and recommended, longer term recalculation of LUP zones may be required. **Neil Jackson + Advantica**

3 Mitigation – Risk Reduction Factors for Physical Protection of Pipelines.

- Initial Fault Tree analysis paper requires updating to incorporate comments by Neil Jackson – **Rod McConnell / Neil Jackson**
- Coordinate with PIPESAFE – meeting on 20 October. **Neil Jackson**
- Peer review and discussion with HSE. **Rod McConnell / Stuart Pointer HSE**
- Assess next Mitigation method and risk reduction factors for review. **RAWG**

4 Ethylene Pipelines – Revision of LUP zones.

- Review and complete fault data assessment of UKOPA database to confirm application to ethylene pipelines **Rod McConnell / Jane Haswell**
- Review MISHAP application to ethylene - key underlying assumptions (source of ignition probability, flash fire modelling, jet fire modelling, Fireball, indoor/outdoor exposure). **Rod McConnell**
- Write papers on modelling with specific calculated example **Rod McConnell**
- Engage in discussions with HSE to allow revised LUP zones to be established and codified for inclusion in BS PD 8010. **Rod McConnell / Jane Haswell**

5 Spiked Crude – Revision of LUP zones .

- Peer review Atkins reports on HSE's methodology and HSE's detailed response, identify and confirm areas of disagreement, primarily failure rate data and flash fire modelling – **Rod McConnell**
- Meeting with BP to agree ongoing strategy – **Rod McConnell, Neil Macnaughton, Lindsay Boswell**

6 Gasoline Pipeline Risk Assessment.

- Re-evaluate Atkins analysis carried in 1997 for HSE's PIPERS program based on CONCAWE Data **Rod McConnell / Jane Haswell**
- Re- analyse full dataset to include up to 2003 and synthesis failure rate data **Rod McConnell**
- Analyse UK dataset to synthesis UK failure rate data **Rod McConnell**
- Assess Risk assessment basis for inner zone **Rod McConnell / Jane Haswell**
- Provide report for HSE to archive (and for UKOPA and CONCAWE) **Rod McConnell**

7 Environmental Risk Assessment

- Review is environmental risk assessment approach published by TNO for EC Directive (UKOPA 98/0038). **Rod McConnell**
- Devise / recommend alternative approaches **Rod McConnell**

8 Codified Methodology for Risk Assessment

- Devise codified methodology **Jane Haswell**

R A McConnell
6 October 2004