

ACDS MHSC Working Group on Pipelines

Draft Notes of the Working Group on Pipelines Meeting Held on 8th September 2005 at Lancaster University

Attendance:

G P Walker	Chairman
M Harrison	UKOPA/Huntsman
P Davis	UKOPA/BPA
N Jackson	UKOPA/NGT
R McConnell	Independent Consultant
J Haswell	UKOPA/Secretary

Apologies:

P Brown	UKOPA/NGT
S Chatfield	HSE
A Wilson	HSE

1. Introduction

It was agreed that the meeting would be used to discuss the strategy, requirements and review of technical work for the WGP/MSDU joint Technical Seminar, now rescheduled from 27th September to October. With the exception of WGP update, The standard Working Group on Pipelines agenda was therefore suspended to allow this.

1.1 WGP Updates

Representation:-

J Haswell reported that P Sargent has been replaced by Anton Wilson of HSE Policy Unit.

HSE IFRLUP:-

G Walker reported that there had been no progress with respect to the HSE IFRLUP project since the last WGP meeting. He noted that the priorities and direction of the project appeared to be changing within HSE. He also reported that Bill MacDonald has replaced Linda Murray as Project Manager. R McConnell confirmed he had received no information or contact regarding WGP involvement with P6.

UKOPA Meeting with HSE MSDU 11.08.05

Final notes (including MSDU amendments) of the meeting between UKOPA (R McConnell and J Haswell) and MSDU (N Riley, I Hirst, S Porter and G Hawkins) were reviewed. It was agreed the meeting had provided a useful and constructive opportunity for a detailed technical update, and topics and discussion points covered would be considered with respect to the Technical Seminar.

BP – HSE Meeting Re Forties Pipeline

At BP's invitation, R McConnell had attended a meeting between BP and HSE MSDU in relation to the pipeline QRA carried out to assess the risk associated with a planned development within the spiked crude pipeline LUP consultation distance. He summarised key points relating to consequence and failure frequency modelling which had been discussed.

2. Joint WGP / MSDU Technical Seminar – Change of Date

Review of recent correspondence and communications confirmed that MSDU's preferred date for the Technical Seminar was 13th October 2005. It was noted that this was the only date available up until the end of October. Following this, the seminar would need to be postponed until December. It was therefore agreed the 13th October would be confirmed with MSDU.

Action: J Haswell

3. Strategy for Technical Seminar

The strategy for presenting the technical work carried out for WGP at the seminar was discussed. It was agreed that:

- i) The main focus of the WGP input to the Technical Seminar will be the preparation and technical content of the supplements for the pipeline codes PD8010 and IGE/TD/1, as these are the WGP initiative to achieve the original objectives set for the Group.
- ii) The technical work required for the supplements (and the original WGP objectives) will be summarised presented by UKOPA (summarised below for reference)

WGP Objectives	Technical Work
Facilitate adoption of UKPOA Pipeline Fault Database by HSE (and other stakeholders)	<ul style="list-style-type: none"> i) Material and construction defects - Assessment of Application of database to all pipelines ii) Natural causes – identification of areas affected by land movements and analysis of pipeline failure frequency iii) 3rd Party Damage – Development of improved failure limit state
Implementation of HSE Codified LUP zones for natural gas pipelines	<ul style="list-style-type: none"> i) Review of failure frequency due to 3rd party interference to low design factor (S Area) pipelines ii) Application of failure frequency due to natural causes (ref ii above)
Modelling of risk mitigation	<ul style="list-style-type: none"> i) Effect of depth of cover ii) effect of pipeline protection (slabbing and marking) iii) Other measures
<ul style="list-style-type: none"> Agreed consequence models for MAHPs Re-evaluation of LUP zones for other MAHPs Risk criteria (specifically societal aspects) 	<ul style="list-style-type: none"> Development of agreed approach and risk assessment methodologies for definition of inner zone and risk transects defining the 10^{-6} and 3×10^{-7} risk contours for <ul style="list-style-type: none"> i) gasoline (priority reduced following HSE withdrawal of amendment to PSR 96) ii) ethylene iii) spiked crude iv) NGL, LPG, propylene, ethane etc

- iii) The Seminar will provide a wider arena for presentation of the supplements and the supporting technical work.

4. Review of Progress on Supplement Development

A draft presentation on the development of the supplement prepared by J Haswell and R McConnell was reviewed in detail for presentation at the Technical Seminar. Key points noted were:

- i) The context for the supplement needs to concentrate on the codification of the requirements for risk assessment methodology applied to site specific assessments, generic solutions for risk assessment (ie benchmark solutions for pipeline design cases)
- iii) An explanation of the role and value of the pipeline engineering codes 8010 and IGE/TD/1 in the UK to be presented.

- ii) The role of codes in providing guidance on the requirements for compliance with legislation to be clarified.
- iv) The presentation must stress that the purpose is to define the methodology for risk assessment and to publish benchmark risk transect solutions (to provide risk level versus distance solutions for specific pipeline design cases, not to define land use planning zones.
- v) The benefits of the supplement to be explained in terms of:
 - Awareness of the need for separation distances between pipelines and developments within their vicinity.
 - Management (by pipeline operators) of risks associated with changes in developments.
 - Assessment of site specific aspects, ie enabling site specific situations to adjust the local risk levels and therefore influence the land use planning zones.
 - Incorporation of mitigation.
 - Define technical and quality assurance requirements for pipeline risk assessment to ensure consistency and validity of results.
 - The publication strategy involves acceptance by all stakeholders
- vi) The requirement for the code supplements to:
 - Outline the principles of LUP rather than specific requirements of the current HSE PADHI document.
 - Establish a generic link with the PADHI document.
 - explain how the supplement fits with the formal LUP approach, and how they are to be applied
 - Establish a generic link with the PADHI document.

5. Technical Comment on Current Supplement Drafts

The technical content of the current draft of the supplement was reviewed in detail. Key points noted in discussion were:

- i) Use of generic risk levels to replace reference to LUP zones.
- ii) The supplement requires a full explanation of site specific aspects, concentrating on how these differ from generic risk assessments. Case studies are required for certain aspects, eg implementation of mitigation.
- iii) The inclusion of risk reduction factors is seen to be valuable but it was noted specific factors may be difficult to justify at this stage, so the supplement should include guidance on how the effect of 'other measures' should be demonstrated.
- iv) Use of the UKOPA mechanical damage model – there is potential to simplify the way in which the results are presented. Diagrams explaining the relationship between pipe geometry parameters and damage parameters are required. In addition, there is the need to extend the application of the model to pipeline diameters to below 200mm.
- v) The features included in the mechanical damage model (which are consistent with HSE modelling) are to be explained.
- vi) The presentation of information relating to specific mitigations measures (eg depth of cover, surveillance) required more detailed consideration.

6. Gasoline Pipelines

R McConnell reported that all work actioned on risk assessment of gasoline pipelines is now complete. A methodology has been developed based on spray and pool fire consequences and scenario dependant ignition probabilities. The work has included full documentation of the detailed

assessment of the data made available by CONCAWE. It was agreed that P Davis would share this work with CONCAWE on behalf of WGP.

This work carried out by R McConnell for UKOPA was accepted by WGP. A formal UKOPA report was actioned.

Action: R McConnell

7. Agenda for the Technical Seminar

It was agreed that key points extracted from the above discussion would be summarised and constructed as an agenda, agreed with G Walker and sent to Nigel Riley of HSE MSDU.

Action: J Haswell

All attendees to be notified the date of the seminar will be 13th October 2005 at Daniel House, Bootle.

Action: J Haswell