

## MAJOR HAZARDS SUB-COMMITTEE Working Group on Pipelines

### Remit for the Working Party (Risk Assessment)

#### Introduction

The initial meetings of the Working Group on Pipelines (WGP) have revealed that there are detailed aspects of risk assessment methodology and approach which need to be considered as part of the development of Land Use Planning for pipelines.

To facilitate this process, a specific Working Party (Risk Assessment) (i.e. WP(RA)) is proposed which will progress these detailed issues and report back to WGP.

#### Remit / Terms of Reference

The remit of the group is as follows:-

- 1 To identify, debate, discuss and resolve key aspects of risk assessment methodology as applied to UK pipeline systems so that a consistent and coherent methodology can be agreed for future application to Land Use Planning issues.
- 2 To form relevant industry/HSE Task Teams to develop and agree specific methodology for pipeline systems. These might include Natural Gas pipelines, Ethylene pipelines, Gasoline pipelines etc.
- 3 All work programmes are to be directed and approved by WGP.
- 4 Progress is to be reported back to WGP, along with conclusions, discussion papers, and any issues which need resolving.
- 5 WP(RA) is to be dissolved when issues have been resolved.

#### Organisation of the Group

At this stage it is proposed that the WP(RA) is formed by nominated HSE Specialist Inspectors (Ian Hirst, Stuart Pointer and others, as appropriate) and existing members of UKOPA's Risk Assessment Working Group (Rod McConnell, Jane Haswell, Neil Jackson (Transco), Phil Joyner (BP), Roger Ellis (Shell), Ken Thomas (Huntsman), and Peter Davies (BPA). Rod McConnell will act as Co-ordinator of the new WP(RA) to organise meetings and produce agreed notes. In addition nominated Task Teams will be identified to progress specific issues. This will allow best use of resources and expertise to progress specific areas. Any decisions by the group will require representation and agreement by HSE and UKOPA members.

#### Work Programme

The initial proposed work programme is attached.

R A McConnell  
**Initial Work Programme**

## **1 Facilitate adoption of UKOPA Data by HSE**

High priority programme to be developed to drive forward the incorporation of the UKOPA database into HSE model for pipeline failure rates. Results are now available from the latest UKOPA Leak and Predictive modelling databases, and the WP(RA) will facilitate the process of developing the data into a compatible format for the HSE model.

## **2 Proposed “Coded” LUP Zones for PGT Natural Gas Pipelines**

Evaluation of LUP zones by Transco have reached different conclusions from those obtained by HSE. Discussions are ongoing concerning the frequency data and consequence modelling being applied.

## **3 Mitigation Aspects – How to Incorporate into Risk Assessments**

Edition 4 of IGE/TD/1 now recognises a number of prevention and mitigation aspects to reduce the potential for 3<sup>rd</sup> party interference. WP(RA) will review the HSE research report CRR 372 on mitigation measures. These should provide the basis for further consideration of how “Active” and “Passive” mitigation measures should be taken into account when carrying out risk assessments.

## **4 Re-evaluation of Land Use Planning Zones for Ethylene Pipelines**

The WGP Technical Workshop identified that LUP zones adjacent to non-natural gas pipelines were set using HSE’s PRAM model, and may therefore be conservative. While recognising that re-evaluation via an organised project may be necessary, the WP(RA) will examine aspects which would allow the LUP zones to be re-evaluated for

3(i) the 4 ethylene pipelines in the UK

3(ii) this would then progress to other fluids including spiked crude, propylene, etc.

## **5 Consequence Modelling – Event Trees**

As identified during the Technical Workshop, differences in approach for the probability of certain outcomes, starting with the ignition probability, have a significant effect on the overall results from risk assessments. WP(RA) will review the event tree probabilities following pipeline leak and rupture scenarios for various substances.

## **6 Risk Criteria – especially the Societal risk aspects**

As recorded at the technical workshop, input to discussions on risk criteria for pipelines, building on the R2P2 work and involvement in a review project which HSE are considering funding.