Fluxys Pipeline Incident 30th July 2004

- Village of Ghislenghien, Ath, 20 miles South East of Brussels
- 1066 mm (42”) dia pipeline, X70, design pressure 80 bar, operating at 71 bar, commissioned 1992, designed and constructed to ASME 31.8
- Leak followed by subsequent catastrophic failure (rupture) and fire.
- 23 dead and about 140 people seriously injured.
- 3rd party construction team had recently built roadway and car park within industrial estate for Diamant Boart (factory owner).
- Distribution company, Electrobel, had office and store on site, but no distribution pipes.
- Electrobel and Emergency Services were on site investigating reported gas escape. Fluxys team on way to site to investigate when failure occurred about 1 hr after initial call.

UKOPA/04/0093

Pipeline failure fire

Pipeline failure

Pipeline failure

Pipeline failure crater

Pipeline damage

Fluxys plant protection requirements

- Fluxys procedures for activities near pipeline
  - 15m from pipeline – Protected area: Information duty in case of works by third parties.
  - 5m from centre of pipeline – Reserved area: Forbidden to build.
  - 1m from pipeline – Limitations imposed by Fluxys regarding use of machinery.

Pipeline incident and damage – not all of this information substantiated by Fluxys

- Pipeline wall thickness 13.6mm (with no under-tolerance)
- Multiple cuts and gouges (parallel and regularly spaced) on the pipe in the area of the failure point. Similar damage present on adjacent pipe sections.

Details of pipeline incident and damage (continued)

- Failed pipeline was 15 m from Diamand Boart building.
- A parallel pipeline (900mm diameter), 7.5 m from failed pipeline and 7.5 m from the building, was unaffected by the failure.
- Failed pipeline was under the road to the car park. Completed road had concrete surface.
- Parallel pipeline was beyond the edge of the road.
- Parallel pipeline did not have any similar cuts or gouge damage.
- In the days prior to the incident the pipeline had been operating at around 60 bar.
- Pressure in failed pipeline was at about 71 bar for about one hour prior to failure.

Issues for UK MAHP Operators

- Control of third party activity around pipelines
- Dealing with sub sub contractors
- Ensuring damage is reported and raising awareness of potential consequences of unreported damage
- Emergency response – safe evacuation distances
- Communication with control room – ensuring pressure is not increased when damage occurs
- Land Use Planning – control of development
- Sharing of pipeline location information with other operators