

# Fluxys Pipeline Incident 30<sup>th</sup> 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.
- 3<sup>rd</sup> party construction team had recently built roadway and car park within industrial estate for Diamant Boart (factory owner).
- Distribution company, Electobel, had office and store on site, but no distribution pipes.
- Electobel 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



RFF



# 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