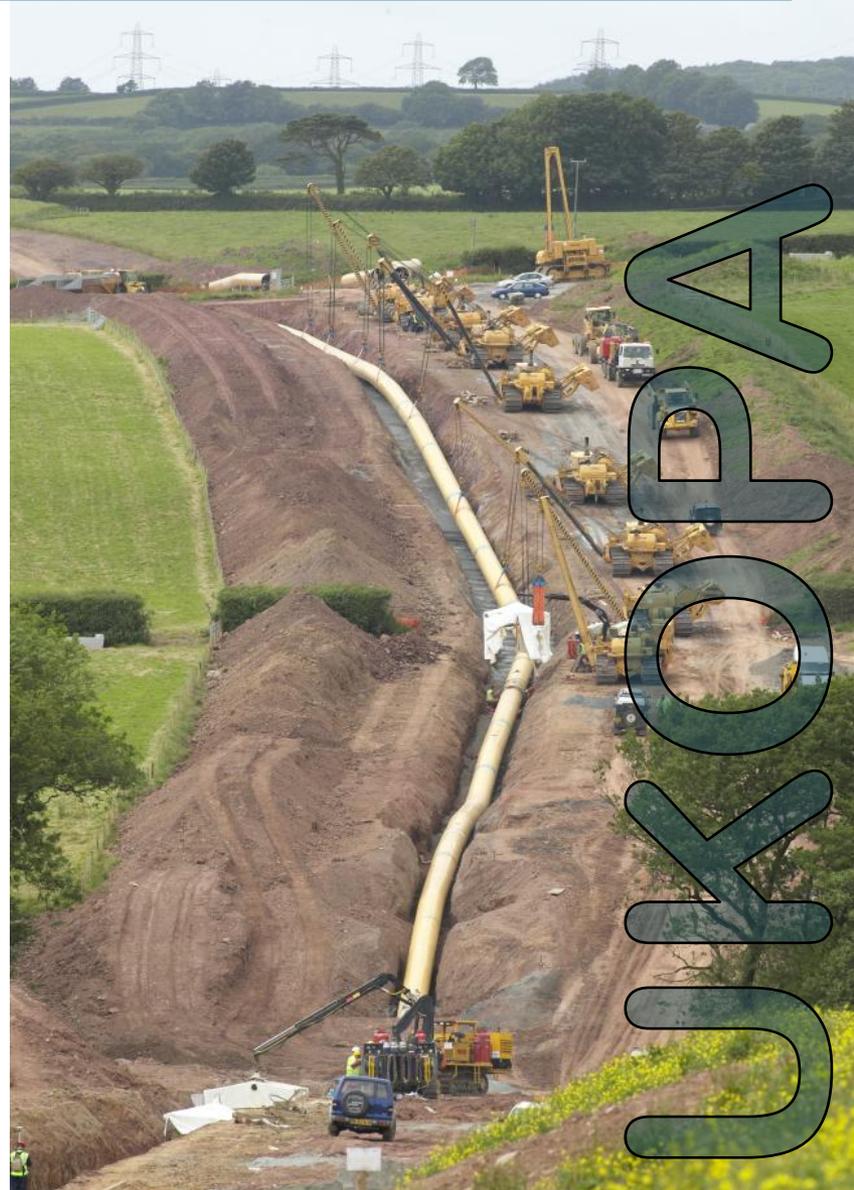


## Emergency Hazard Distances

Good Practice Guide  
(GPG)



# Emergency Hazard Distances

---

- Good not best practice
  - Because we are always looking to improve
- Cross working group reviews as per the governance process
- Linked to the three emergency documents

# Emergency Hazard Distances

---

- Aimed at:
  - Local government
  - First responders
  
- It is **NOT** a technical document

# Emergency Hazard Distances

---

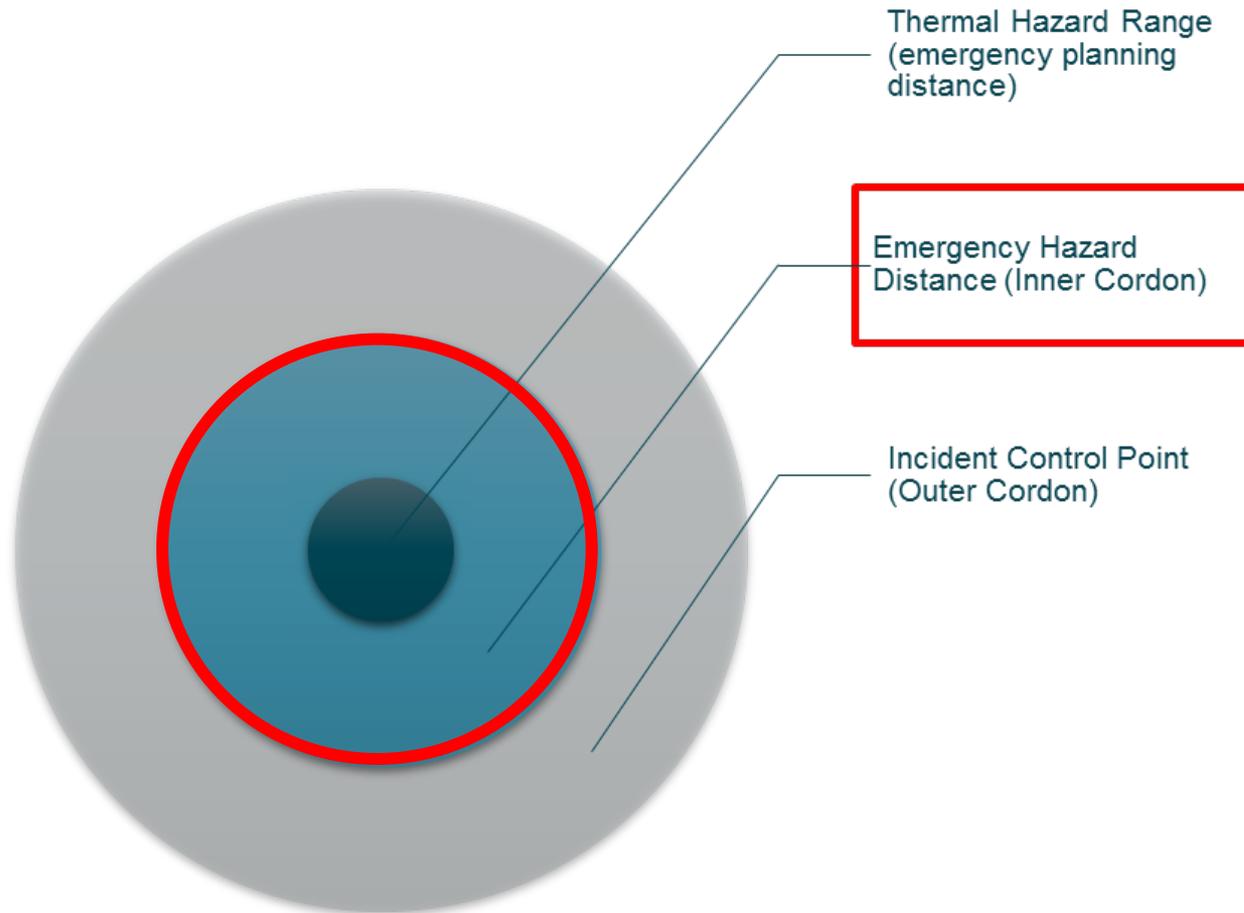
- But is based on sound technical knowledge and experience
- Two technical papers by Rod McConnell
  - Recommended Emergency Planning Distances for Hydrocarbon Liquids, 5 March 2012,
  - Recommended Ethylene Emergency Planning Distances, 18 June 2013
- A review of all the GDN's current EM72 procedures for first response to gas escapes

# Emergency Hazard Distances

---

- Feedback from PIWG
  - Differentiate between MAHP and NON MAHP lines (liquid lines)
- Concern over hazard distances resulted in discussion and the following agreements

# Emergency Hazard Distances



**(NB these definitions may vary slightly based on the specific pipeline operator)**

# Emergency Hazard Distances

## Emergency Hazard Distances for Natural Gas Pipelines

Size or pressure of pipeline	Emergency hazard distance / Initial Inner Cordon
1219mm <b>AND</b> >70 bar g	900 metres
> 610mm <b>OR</b> >40 bar g	750 metres
≤610mm <b>OR</b> ≤40 bar g	500 metres

**It is therefore recommended that the emergency hazard distance or inner cordon for natural gas pipelines should be initially conservatively as stated**

# Emergency Hazard Distances

## Emergency Hazard Distances for Ethylene Pipelines

Pipeline diameter (mm)	Thermal hazard range	
	1000 tdu Fireball hazard distances (metres)	700 tdu Fireball hazard distances (metres)
219	100	120
273	140	165
324	170	200

**It is therefore recommended that the emergency hazard distance or inner cordon for dense phase ethylene pipelines should be conservatively set at 250 metres.**

# Emergency Hazard Distances

---

## Emergency Hazard Distances for Liquid Hydrocarbon Pipelines (MAHP)

Maximum operating pressure (barg)	Maximum thermal hazard range (metres)
40	80
50	100
60	120
70	140
80	160
90	180
100	200

**It is therefore recommended that the emergency hazard distance or inner cordon for liquid hydrocarbon pipelines should be conservatively set at 250 metres.**

# Emergency Hazard Distances

## Emergency Hazard Distances for Liquid Hydrocarbon Pipelines (NON-MAHP)

Pipeline diameter (mm)	Thermal hazard range	
	1000 tdu Pool Fire hazard distances (metres)	700 tdu Pool Fire hazard distances (metres)
168	30	35
273	45	55
324	50	60
508	65	75

**It is therefore recommended that the emergency hazard distance or inner cordon for liquid hydrocarbon pipelines should be conservatively set at 150 metres.**

# UKOPA

United Kingdom Onshore Pipeline Operators' Association

---

**Final questions?**

