UKOPA Fault Database Management Group UKOPA/07/0070

Technical Case for Gasoline Operators to join the UKOPA Fault Database

- Gasoline pipelines likely to become MAHPs under Pipeline Safety Regulations during 2008-9
- Land Use Planning zones will then be applied
- Zone distance for Middle and Outer zones will be based on risk
- Risk calculation requires an estimate of pipeline failure rates for holes and rupture failures
- Failure rates for holes more important than for gas pipelines

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Technical Case for Gasoline Operators to join the UKOPA Fault Database

- Generic Failure Rates currently based on:-

  - 3rd party failures – UKOPA fault data generated for gas pipelines

  - natural (ground movement) – based on UKOPA data but under discussion with HSE

  - mechanical failures (material or construction defects) based on CONCAWE data

  - corrosion failures – based on CONCAWE data

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Technical Case for Gasoline Operators to join the UKOPA Fault Database

- Advantages of including Gasoline in Fault Database:-

  - Confirmation that same 3rd party failure rate applies as for gas pipelines, also include fault data for gasoline

  - natural (ground movement) – more data to support case for lower natural failure rate

  - lower mechanical failures (material or construction defects) based on UK data including fault data

  - Lower corrosion failures – based on UK data

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Technical Case for Gasoline Operators to join the UKOPA Fault Database

CONCAWE Data derived by UKOPA for UK Product Oils

	pinhole	hole	rupture	Total
Mechanical	10.3%	9.4%	5.1%	24.8%
Natural	0.9%	3.4%	1.7%	6.0%
Corrosion	5.1%	20.5%	0.9%	26.5%
3rd Party	10.7%	22.6%	9.4%	42.7%
Total	26.9%	56.0%	17.1%	100.0%

- would expect high proportion of mechanical and corrosion failure rates (over 50% of total) to reduce if UK data was collected