

PEC GROUNDWATER - UK

- Environmental Panel agreed in principle to use of following FOCUS groundwater scenarios for 1st tier:

Chateaudun, Hamburg, Kremsmunster, Okehampton

with PEARL, PELMO, PRZM (FOCUS shells) to support decisions on product approvals in UK

PEC GROUNDWATER - UK

- Further consideration needed on whether/how preferential flow should be included in decision-making process



PEC IN SURFACE WATER VIA DRAINFLOW UK 1st TIER APPROACH

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UK Situation

- Relatively high proportion of arable land comprises heavy clay soils
- Relatively wet climate esp. Autumn-Spring
- Extensive use of drainage systems on such land
- Significant pesticide use during such periods

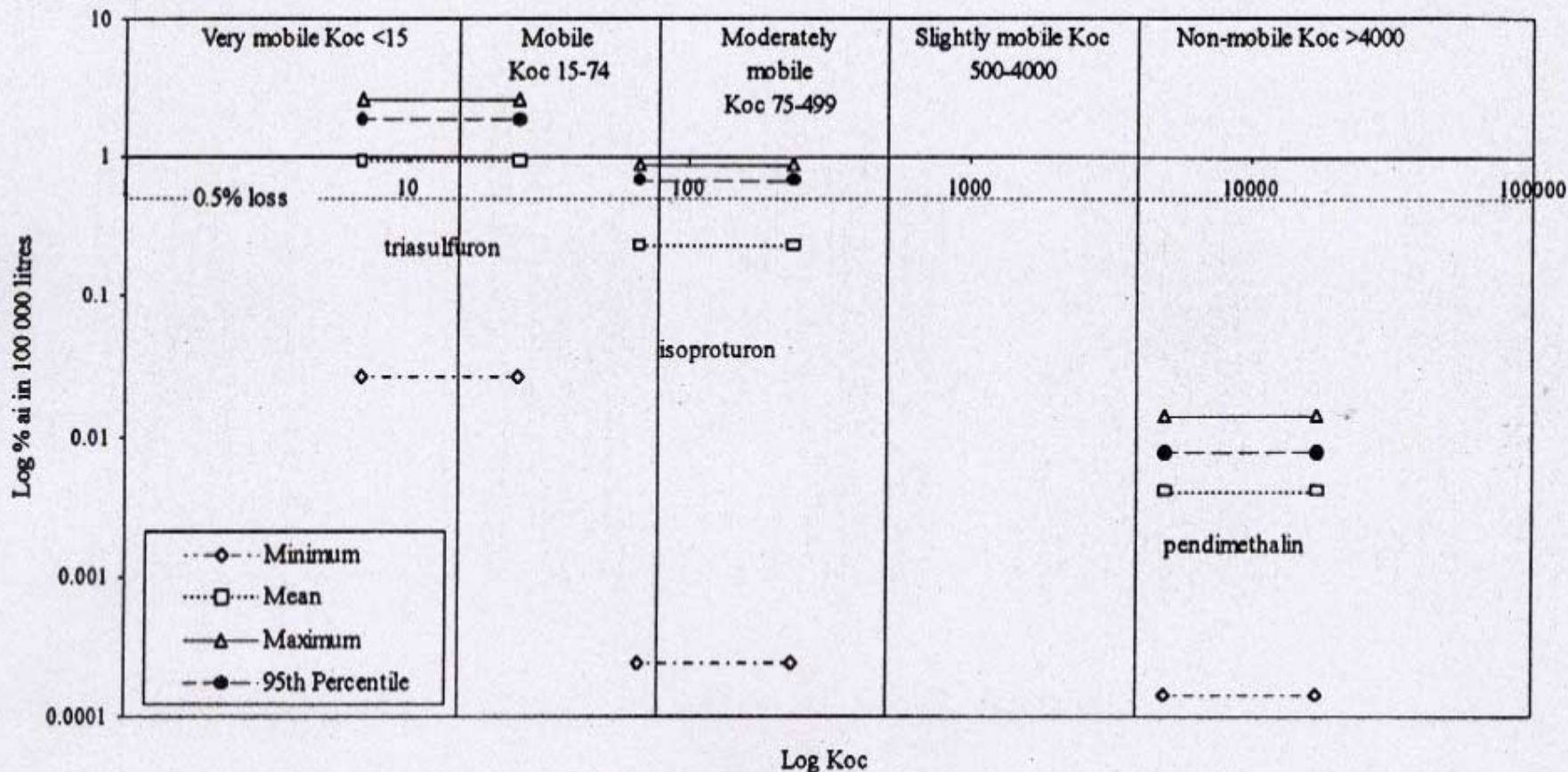
RESULT

Potential threat of contamination of surface waters via leaching into drainage systems

Regulatory Response

- Absence of existing exposure assessment
- Devise UK specific **1st Tier** scenario based on Brimstone data

Brimstone data: plot of Log% ai in 10mm drainflow vs Log Koc



All three years - 95th percentile values % ai in 10 mm drainflow

- Pendimethalin 0.008%
- Isoproturon 0.7%
- Triasulfuron 1.9%

Proposal

- Drafted by PSD
- Discussed by Environmental Panel x2
- Consultation exercise with industry
- Endorsed by ACP
- Applied to evaluations to PSD since January 2000

Assumptions

- Covers October - April period
- 1 ha area
- 10mm drainflow = 100,000 l water
- Flows into 30cm deep ditch = 30,000 l
- Total 130,000 l water
- Variable loss of pesticide into drainflow

% of Pesticide loss in drainflow

<i>Mobility classification</i>	<i>Koc</i>	<i>% active ingredient transported per 10mm drain water.</i>
Very Mobile	<15	1.9%
Mobile	15-74	1.9%
Moderately mobile	75-499	0.7%
Slightly mobile	500-1000	0.5%
	1000-4000	0.02%
Non mobile	>4000	0.008%

Consequences

- Drainflow PEC_{sw} can frequently exceed spray drift PEC_{sw}
- Can be significant problem where Koc is <1000
- May affect persistent compounds applied outside October-April period
- Risk mitigation measures limited

Help!!

- Remember, 1st tier assessment, extreme scenario
- Higher tier approaches are welcomed, e.g. model drainflow (typ. MACRO), model dissipation in surface water.
- Anticipated (subject to agreement) that may be replaced by FOCUS surface water (Brimstone is FOCUS step 3 scenario)