



# **“Weight of Evidence” in Hazardous Material Screening**

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# Disclaimer

The opinions and conclusions presented here are those of the author alone. They should not be construed as anything else, particularly not as an expression of NA-41 policy or guidance.

# Weight of Evidence:

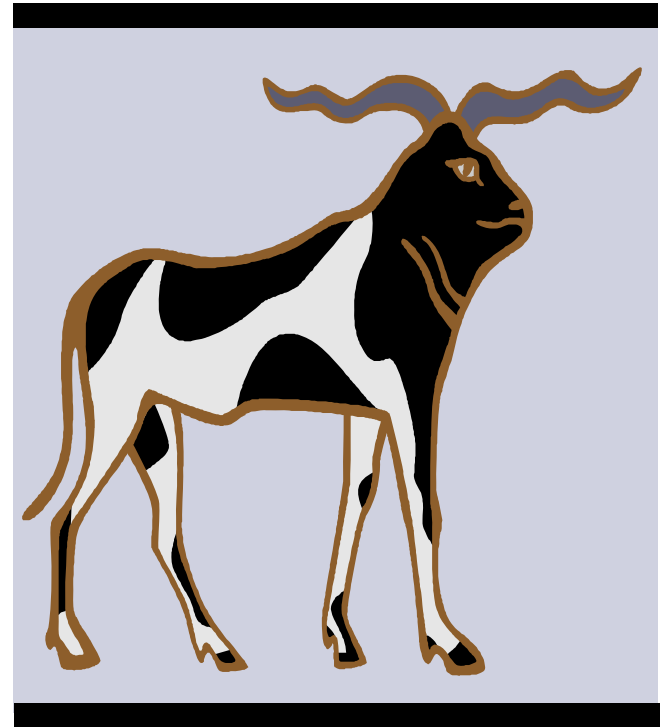
*(n) the strength, value and believability of evidence presented on a factual issue by one side as compared to evidence introduced by the other side.*

*The LAW.COM Dictionary*



# A screening dilemma

- Toxic or hazardous property (??)
- Can't **clearly** exclude using Order criteria
- May be poorly characterized
  - Vapor pressure?
  - Acute toxicity?
  - Formulation?



# A screening dilemma

- Gut check says “no hazard”

***BUT***

- Can't find info needed for accurate analysis of release (proprietary mixture?)

***SO***

- EPHA yields results that are at odds with community experience and professional judgment.

# 1. Don't be a Lone Ranger

Find the *real* experts

- Operations staff
- Industrial hygiene
- Hazmat response
- Physical chemistry
- Toxicology
- Vendor personnel

## 2. Understand the vendor's HHR

- Vendor's HHR may not be relevant to *airborne* toxic hazard
- Some HHRs may be based on most toxic component in mixture
- Some may attempt to “bound” possible health hazard considerations (CYA)



# 3. Handling/use instructions

- Vendors must provide safe handling/use instructions
- Liability for injury/damage tends to make for conservative recommendations
- Resp. protection or special ventilation usually recommended for open ops with toxics
- Absence of such precautions indicates low airborne toxicity concern



## 4. How will you use it?

- Evaporative source?
- Spray release possible?
- Low VP + no spray release = nondispersible **UNDER EXPECTED CONDITIONS OF USE**

# 5. Physical/chemical properties?

- Fraction of fines/powders?
- Aqueous solutions of solids?
- Raoult's Law (partial pressures) for VP of toxic component of mixture

# So what do I do with all this?

***Correct answer, but show your work (minus 3 points)...***

- Present your experts' qualifications
- Summarize your data and conclusions within each expert's field of knowledge
- Document your conclusion – the substance is/is not a potential air-dispersible toxic hazard for which hazard-specific analysis and planning is needed.