

## Exposure Assessment Tools: October 9-10, 2012, Workshop

### AM Breakout:

Additional EA needed – what's missing in tools:

- info for articles & assemblies – may not be known
- info for certain products & industries
- unknown information
- manage uncertainty in terms of exposure

In automotive industry, exposure is often used separately from risk, due to recyclability

- 90% of auto is recycled
- mkt exists for most parts of autos, very little is landfilled
- GHG pollution from autos is predominant concern (fuel consumption)
- vehicle EOL directive – EU EOL directive IDs which chemicals must be reduced  
Chems with high vapor pressure

Other regulatory agencies – may have other exposure provisions

- exposure/day from OEHHA may translate to production  
Data and worst-case scenarios

Guiding Principles for EA:

- Safety: uncertainty leads to larger MOS
- data is much better than models and should always be used when available
  - Data is available within industry
  - Within industry associations
  - Money can be used to compensate for lack of data (? – funding studies?)

Questions:

- if exposure is zero, is hazard still important?
- what should hazard + exposure coupling look like? Loose, not tight?

Guidance:

- include general categories of tools that can be used/selected as appropriate for case
- need certainty wrt preferences, hierarchy, preferred sources
- step-by-step description of what needs to be done, like guide for RFP
- tool boundaries/limitations – best and worst use scenarios, when they are appropriate

Exposure Assessment Approach:

- describe EA vs RA in AA
- data gaps – how will uncertainty be managed?
- what are possible solutions? How much flexibility? I.e. routes of exp considered?
- data over model hierarchy – EPA: data first if available  
See RA in industry presentations at GMA seminar  
Automotive industry: first look at exp & strive to reduce exposure
- are models used?

What's needed?

- info for downstream users: they use/need data for AA assessments
- look to Canadian chem policy – more manageable than REACH

### PM Breakout:

When/how does exp figure into AA?

- prepare for unavoidable uses
- limit exposure when can't eliminate chem
- helps to streamline HA – brings focus
- screening is done based on exposure, ie in Prop 65, EA done early to see if chem is of concern
- env'l remediation, risk assessment, Prop 65, REACH

Tools for exposure assessment:

- Chesar – exposure assessment
- internal proprietary models
- IEUCLID – template report

Internal processes are important

Consider sensitive populations – default is consumers and workers, can these be applied?

- should bring in epidemiologists & occup health people?

Include in guidance how we determine exposure:

- literature looked at
- info used
- routes of exp
- calculations based on scenarios
- testing in real life situations and using worst case scenarios
- published habits & use data – SCCP has published guidance

OSHA & other guidance are used to establish parameters for exposure assessment

- develop SOPs
- determine application in field and garage
- MSDS sheets used for occupational exp – analogous to instructions for consumers

Guidance should direct people to info such as:

- existing exposure models
- exposure is universal, not just use and manuf, also unintended use & end use/disposal
- checklist of things to consider
- pathways to be aware of
- list of tests needed
- minimum stds for what's required
- expectation of how info is to be used by DTSC
- applicability – how applied?
- environment – where used?
- is zero exposure expected? If no exposure, then no hazard?
- include limits & some step-by-step procedures, but flexibility is imp, too
- define if they need to use most conservative assumptions for protection
- children's products with inaccessible parts – how to determine exposure then
- cost of alternatives – esp if work stoppage is result of AA
- when is good, good enough?
- many manufacturers (ie toys) will not do exp studies, will rely on others & other data

Include RA in guidance – it's a part of the process

Set targets: numerical bars as part of guidance

Trade associations develop use guidelines

le: tires have proprietary secret formulation, testing is based on functionality

Will guidance be tailored to each sector? Not at beginning, maybe later

Guidance should:

- exempt OTC drugs
- include compliance with federal law as threshold criteria
- include all assumptions for assessment, LC assumptions, etc
- include cost/economic impact
- identify what kinds of exp assessment/risk assessment to do

Uncertainty – how to manage in exposure assessment

- pursue to certainty
- not very numerical – quantifiable?