

Topic #2 --- Tiered Alternatives Assessments

INTRODUCTION:

AB 1879 (Health and Safety Code (HSC) section 25253) requires DTSC to adopt regulations that establish a process for evaluating chemicals of concern in consumer products, and their potential alternatives, to determine how best to limit exposure or to reduce the level of hazard posed by a chemical of concern. The statute further requires that this process include an evaluation of the availability of potential alternatives and potential hazards posed by those alternatives, as well as an evaluation of critical exposure pathways. The alternatives assessment (AA) process is required to include life cycle assessment tools that (at a minimum) take into consideration all of the following:

- (A) Product function or performance
- (B) Useful life
- (C) Materials and resource consumption
- (D) Water conservation
- (E) Water quality impacts
- (F) Air emissions
- (G) Production, in-use, and transportation energy inputs
- (H) Energy efficiency
- (I) Greenhouse gas emissions
- (J) Waste and end-of-life disposal
- (K) Public health impacts, including potential impacts to sensitive subpopulations, including infants and children
- (L) Environmental impacts
- (M) Economic impacts

HSC section 25253(b) provides the authority for the imposition of regulatory responses “following completion of the alternatives analysis”.

Many stakeholders have urged that the regulations allow manufacturers to do a less complex or “tiered” AA than the AA called for in the statute. Many of these same stakeholders want to see regulatory responses imposed upon completion of such a streamlined AA rather than waiting until completion a more complex AA as called for in the statute. Two basic tiered AA concepts have been suggested to date:

Concept One --- The lower (i.e., less complex) tier(s) would not include consideration of the full range of factors listed in HSC section 25253. An example might be the Design for the Environment evaluation process (see *Attachment 2-2*). Using this type of approach could perhaps be accomplished by allowing a manufacturer to do only a lower tier AA if the manufacturer agreed to implement a DTSC-determined regulatory response upon completion of the lower tier AA.

Concept Two --- All tiers would include consideration of all of the AA factors listed in HSC section 25253, but the rigor of the required data and evaluation would increase from the lowest to the highest tier AA. For example:

TIER 1: Only qualitative responses to a list of evaluation questions (to be specified by DTSC) would be required. (One model that has been suggested is the California Environmental Quality Act (CEQA) Environmental Checklist (see *Attachment 2-3*).

TIER 2: This tier would require a quantitative assessment of impacts using existing literature and test results.

TIER 3: This tier would apply when the manufacturer or DTSC, following completion of a Tier 2 AA, determines that the assessment of one or more impacts requires the development of new scientific data and/or the running of environmental models.

See *Attachment 2-4* for additional details.

LIST OF ATTACHMENTS:

- 2-1** Statutory (AB 1879) Requirements for Alternatives Assessments (HSC section 25253)
- 2-2** USEPA Design for the Environment Alternatives Assessment Criteria for Hazard Evaluation (*draft, January 2011*)
- 2-3** California Environmental Quality Act (CEQA) Environmental Checklist (*revised 2009*)
- 2-4** Tiered Alternatives Assessment Concept Model (*prepared by GRSP members Ann Blake, Ken Geiser and Kelly Moran --- April 2010*)
- 2-5** "Alternatives Assessment for Chemicals: From Problem-Evaluation to Solutions – Assessment and Implementation" (*Background paper for March 31 – April 1, 2011 Interagency Discussion on Alternatives Assessment, 3/24/2011*)
- 2-6** "Alternatives Assessment Framework" (*Lowell Center for Sustainable Production, July 2006*)
- 2-7** Excerpts from "Five Chemicals Alternatives Assessment Study" (*Toxics Use Reduction Institute, University of Massachusetts, June 2006*)
For complete study report go to: www.turi.org/library/turi_publications/five_chemicals_study
- 2-8** "Guidance on the Preparation of an Application for Authorisation" (*ECHA-11-G-01, January 2011*), and "Guidance for the Preparation of an Annex XV Dossier for Restrictions" (*ECHA, June 2007*)

SEE INTRODUCTORY MEMORANDUM FROM GRSP MEMBER TIMOTHY MALLOY WHICH IDENTIFIES THE MOST RELEVANT SECTIONS OF EACH DOCUMENT.

Question #2A: Which of the above, or other, approaches should be used for developing a tiered AA process?

- (i) Should the tiers be distinguished by the scope of factors required to be evaluated?
- (ii) Should the tiers be distinguished by the required robustness of the data gathering and analysis?
- (iii) Other ideas?

Question #2B: If the tiers are distinguished by the scope of factors to be evaluated, how many tiers should there be, and what elements should be required to be included for each AA tier?

- (i) Public health impacts associated with the chemical of concern
- (ii) Environmental impacts associated with the chemical of concern
- (iii) Exposure potential
- (iv) Public health and environmental impacts associated with one or more life cycle segments of the product
- (v) Product function and performance
- (vi) Economic impacts

Question #2C: What data or other information should be required to be obtained or developed and evaluated to support each AA tier?

- (i) Should there be minimum requirements for documentation data for each element of a tiered AA? If so, what should they be?

Question #2D: What should be the circumstances or conditions for allowing a manufacturer to conduct a lower tier AA?

- (i) Chemical substitution versus product redesign
- (ii) Availability of known alternatives
- (iii) Availability of previously completed relevant AAs
- (iv) Other ideas

Question #2E: Should / how should lower tier AAs be linked to the different types of regulatory responses?

Question #2F: Other related ideas?

See *Attachments 2-5, 2-6, 2-7 and 2-8* for information on alternatives assessment approaches developed and used by other states, the Lowell Center for Sustainable Production, the Toxics Use Reduction Institute (University of Massachusetts Lowell), and the European Chemicals Agency (ECHA).