

Websites: www.cectoxic.org + www.ecothreatny.org + www.toxicfreefuture.org

May 1, 2013

Re: Guidance for Alternatives Assessment and Risk Reduction

Dear Technical Alternative Assessment Guidance (TAAG) Team and the Interstate Chemicals Clearinghouse,

We especially want to thank Alex Stone and the TAAG Team and technical advisors for all of their hard work on this document. This guidance is a very important endeavor in the pursuit of Safer Chemicals. We can only apologize for our inability to devote adequate time to this important project until the last minute. We earlier attempted to start a review but were pulled away with other priorities. We hope you will take these recommendations in the collaborative spirit in which they are intended.

We may try to get additional comments on the Supporting Documents submitted on the last day of the deadline.

#### **General Comments on the Main Document**

The organization of the document could be improved, so that the sections are logical and the reader can connect to more detailed supporting documents where necessary. If modules are numbered, the appendix of supporting documents could also be similarly numbered. We recommend that the Section numbering begin with 1.0. The Table of Contents does not need a Section number. The Appendix of Supporting Documents should be clearly labeled as an appendix and not just start talking about scoping.

We have noted the need for editing throughout the document, but since this process does not lend itself to that, we have refrained from doing so. We recommend that a team of editors, not involved in producing the document, do this review and editing. At a future date we might be persuaded to work on this in track changes just for the purpose of filling in missing words or correcting the wrong word.

#### **Detailed comments**

Definitions: We have not reviewed the definitions in detail. However, we found a very important one missing that is related to additional comments we have.

A **Process Flow Diagram** is different from the System Flow Diagram that is defined. (**System Flow Diagram:** A depiction of the inputs and outputs of a system and how they are connected.)

A process flow diagram should also show inputs, but it should identify all the processes that contribute to the production of a final product.

The processes used in a production line can often contribute to hazards in a plant, or hazards in a final product. The processes should definitely be considered as part of an alternatives assessment. Processes are actions in contrast to inputs, which are materials or energy. Some examples: melting, molding, cutting, baking, grinding, cleaning, painting, etc. Critical information is revealed by process flow diagrams and this step should always be included.

p.16 Section 3.0 Background & Purpose (The choice of this numbering scheme is not clear. There is no section 1.0.)

The IC2 association in the introduction should also mention the supporting members.

## AA Golden Rule

The objective of an alternatives assessment is to replace chemicals of concern in products or processes with inherently safer alternatives, thereby protecting and enhancing human health and the environment.

**Summary or Introduction** would be ideal following the Golden Rule or following the principles.

It should be noted early in this document that the majority of an alternatives assessment and its complexity relates to chemical substitutions, where information must be obtained and evaluated about possible safer alternatives, rather than committing effort, time and money that could be wasted if a poor decision is made and the wrong alternative chosen.

However, some knowledge already exists about safer chemicals and processes and is readily available, which would preclude the need for an extensive alternatives assessment. Since this document is being prepared for a variety of entities including small businesses, we recommend some discussion of available resources and links. Many states provide technical resources directly or through universities or other mechanisms to assist businesses including pollution prevention services. We note that in Section 5 d stakeholders are discussed, although this appears to be for a different purpose. We recommend that somewhere early in the document the person considering an alternative assessment identify available resources, internal and external to whatever entity is involved.

## p. 20 Section 4.0 Implementation Guidance

Perfectly confusing introductory paragraphs. The first paragraph talks about 11 modules and 3 frameworks and the second paragraph talks about seven assessment modules. Then it suggests that the reader has lots of decisions to make about which modules to choose, and in what order. We recommend effort toward a simpler presentation. The first phase is essential to outlining or scoping what your objectives are: These are the four scoping modules--initial evaluation, identification of alternatives, stakeholders, decision. Initial decisions need to be made about how to proceed, stakeholders to consider, which decision framework to use and which assessment modules should be included.

On p. 26, in addition to an internet link for the Decision module we recommend identification of the location of the supporting documents in the Appendix. Some people will only work with a printed document.

## p.22 Assessment Modules

Here we have a situation where some assessment modules are identified as optional. The major concern here is that the Social Impact Module is optional and it includes workers. We recommend that workers associated with the production process or internal to the company always be considered as part of the Hazard Module or Exposure Module. If the end product is specifically for workers, who will use the product several hours a day, these workers should also be considered as part of the Hazard Module. The record of substitutions that have seriously impacted workers is far too extensive to only consider these hazards as an option. The Social Impact Module could still consider broader community impacts and workers involved in other capacities.

## p. 23

# Materials Management Module and Life Cycle Thinking Module

Since we are zero waste advocates we strongly support a materials management framework. Two items are missing in the assessment framework that have attracted a great deal of attention for companies around the globe and in international forums: energy and greenhouse gas emissions. We certainly don't want to subjugate the important consideration of toxics to these issues, however the discussion is inadequate on these two items.

Materials Management is connected to resource use including energy. We think energy and climate change can be included without overwhelming the fundamental purpose of AA.

## p. 31 **5 a Initial Evaluation**

This Section should be Titled 5.0 Scoping Modules

We also recommend that all the detailed discussion of the Decision Frameworks that appears in section 4.0 be moved to Section 5.0. Section 4.0 could contain just a brief description of this module. One section should discuss this topic thoroughly not two sections.

## Then 5.0 a) Initial Evaluation

We strongly recommend that all processes involved in producing the product be identified in a process flow diagram. Some processes contribute to the presence and amount of the chemical of concern and therefore it is critical that they are identified at this stage.

The order provided in this section seems to be reversed-- where you first ask about whether it could be phased out and then why it is in the product in the first place.

We recommend proceeding from why is the chemical of concern in the product? Does it have a useful purpose? How is it introduced into the product? at what point in the process? deliberately added or unintentional?, etc.

We also believe that at this Initial Evaluation, a business has some idea of its competition, market share and whether competitors are claiming to have a safer or greener product. This is useful information.

p. 36 Some tools are listed

We question the following statement:

"Many of these decisions are internal to organization. There are few tools available to help with these decisions."

We recommend discussing the fact that there may have been earlier evaluations of the production process either internally or externally by a consultant engineer, industrial hygienist, etc. New management personnel need to determine whether there are existing records that might be helpful or other personnel that have institutional memory. Chemical sampling results at different stages of the process may have been done. This is another place where outside technical resources could be discussed that may be available through states or universities. Green chemistry resources should be included and the IC2 . If a sector has been evaluated by EPA, thru DfE, or by states, such examples might be mentioned here.

## p. 38 **5b**

We recommend always including the production process and we recommend adding it here. "Alternatives may include chemical substitutions, the use of alternative materials, <u>changes to the</u> <u>production process</u> or product redesign to eliminate the need for a particular chemical in the first place."

p. 46 6a Performance Evaluation Module

## This Section should be titled Section 6.0 Alternative Assessment Modules

Then 6a) Performance Evaluation Module

This section should have some of the summary information and the kinds of questions that should be answered here-- not just refer the reader to the Decision module.

## p. 48 6b) Hazard module

The Hazard module does not concern itself with exposure. Therefore--"Hazard is the set of inherent properties of a substance, mixture of substances or process that, under production, usage or disposal conditions, make it capable of causing *adverse effects* to humans, animals and the environment. " Delete this phrase from this sentence-- ", depending on the degree of *exposure*."

p. 49 The hexane example here provides support for our earlier comment that workers must be considered in the Hazard or Exposure module, not in the optional Social impact module.

## Suggest Title change to EPA pioneered Hazard Assessments

## p. 53

The start of the Green Screen discussion should not appear at the bottom of an EPA chart. It should start a new page. We recommend **GreenScreen Hazard Assessment Tool.** Since this document is advancing the use of this tool it seems we should state the history of its use, its credibility and that this is what is being recommended for the Hazard Assessment. We also question why QCAT is not discussed in the Hazard module. p.59 The answer to the question here is not a good one: What resources and knowledge are required to use this tool? Level 2 assessments

Table 6b-4: Grouping of Alternatives Here the inclusion of the existing chemical is emphasized but the sample chart does not include it.

The issue of data gaps are critical to a Hazard Assessment. Documentation and transparency of assumptions have been emphasized elsewhere. We recommend that all data gaps and limited data for health endpoints be identified and discussed as part of the hazard assessment.

We note more extensive discussion of data gaps in the Supporting Documents-- some of this info should appear in the main part of the guidance.

#### p. 61 6c Cost and Availability Module

Here there is a mention of externalities and internalizing costs, but the glossary does not define these terms. This module starts not from cost and availability but instead with a great deal of Life Cycle thinking which is another module. We certainly think it is appropriate to introduce the externality topic here, but a company needs to deal with the internal basics first. Note that wastes and emissions are inefficiencies and have costs.

#### 6d) Exposure Assessment Module

p. 65 Both near field (direct consumer) and far field (environmental) exposures are considered. Workers involved in production and workers using the product must be considered in the Near Field category here.

Personal Protective Equipment-- ADD the initials when it first appears PPE.

## 6 e) Materials Management Module

We think energy and climate change can be better addressed without overwhelming the fundamental purpose of AA. Note also that process flow diagrams are very helpful in identifying all inputs, including energy, water, etc. and all outputs, including wastes and emissions.

## p.70 6f Social Impact Module

Under Table 6f-1 we recommend Non-abusive working conditions (not just hours) Adequate training, particularly hazard communication training Children should not be working in any situation where they are exposed to toxic chemicals.

6 g) Life Cycle Thinking Module

Based on the discussion here it is clear that you wanted some of the LC thinking under the Cost and Availability Module.

This module looks good and we are glad to see climate change here.

p. 81 Scoping Supporting Documents

We Recommend a Title -- Appendix of Supporting Documents

I Scoping Modules II Assessment Modules

The same order should be used in the Appendix as in the Main document. The Table of Contents should eventually have page numbers.

We may not have adequate time to complete a review of the supporting documents. We will make an effort.

Thank you for your attention.

Sincerely,

Barbara & Wares

Barbara Warren RN, MS Executive Director