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School of Health and Environment

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Dr. Alex Stone Washington Department of Ecology P.O. Box 47600 Olympia WA 98504-7600

Re: Comments on IC2 Guidance for Alternatives Assessment and Risk Reduction

Dear Dr. Stone:

Thank you for the opportunity to comment on the Interstate Clearinghouse on Chemicals (IC2) Guidance for Alternatives Assessment and Risk Reduction. The Guidance clearly demonstrates the dedicated efforts of the IC2 Technical Alternatives Assessment Guidance Team over the past two years. The document is impressive and an excellent comprehensive resource for alternatives assessment (AA) practice. I agree with TAAG Team's definition of alternatives assessment and its solutions-oriented approach that begins with a chemical of concern and a market or regulatory impetus to substitute that chemical with a safer alternative.

Alternatives assessment is a critical tool to support the informed substitution of chemicals and materials of concern. It is a process to ensure a thoughtful transition to safer and more sustainable chemicals. I applaud the TAAG for its efforts to develop resources that can be used by a range of stakeholders to support informed decision-making. Given the increasing focus of governments and the marketplace on reducing chemicals of concern in products, the guidance can play an important and timely role in facilitating safer chemistry.

I concur with the comments submitted by the Biz-NGO Network for Safer Chemicals. The IC2 Guidance document has many strengths, including the comprehensiveness of the material in the document, its parsing the alternatives assessment process over a series of modules, and the flexibility by which it can be used by a wide range of stakeholders in a variety of regulatory and non-regulatory situations.

Nonetheless, there a number of ways in which the document can be strengthened, enhancing informed, yet efficient decisions on chemicals of concern and their alternatives. These include:

• <u>Changing the title</u>: This document is not so much a "guidance" document as a "reference" document. Given that a goal of the document is its utility by a wide range of users who have differing levels of technical skills and resources, it is makes most sense for the document to serve as a reference for both experienced practitioners and those new to the field to learn about alternatives assessment and the steps in its application.

• Further, the guidance (or reference document) should not be a reference guide for alternatives assessment <u>and</u> risk reduction. A key goal of alternatives assessment is to identify and evaluate less hazardous alternatives to chemicals of concern, hence reducing risk. Risk can also be reduced by reducing <u>exposure</u> but not <u>hazard</u>. If the goal is informed substitution and safer chemistry, then hazard reduction must be the first intention of an alternatives assessment process. This is consistent with the principles of green chemistry. Such a focus on hazard reduction is particularly important for chemicals in products where it is difficult, if not impossible to control exposure to single, let alone multiple, dispersive chemicals. Research indicates that product based exposures make a significant contribution to human chemical body burdens.

Hence, I would modify the title to: Alternatives Assessment Reference Guide. Or Reference Guide: Alternatives Assessment for Informed Substitution or supporting the transition to safer chemicals.

- Ensuring a reduction in hazard as a key focus and outcome of the alternatives assessment process. Hazard reduction – and the focus on solutions – is what differentiates AA from risk assessment and life cycle assessment. Consideration of exposure is important in alternatives assessment processes but primarily as a tool for prioritization (for uses of a particular chemical), to identify alternatives with potential unintended consequences, and to reduce any residual exposures after a substitution decision-takes place (for example to process chemicals).
- Ensuring the document does not lead to paralysis by analysis. While the introduction makes it clear that the user can choose (beyond the four "minimum" modules) which to include in the analysis, as written the document could be construed to mean that an alternatives assessment is not thorough or comprehensive without including all of the modules. This is problematic. Few, if any, alternatives assessments include all of these components and, indeed, completing all of the analyses at the highest level could lead to high costs and paralysis by analysis which is inconsistent with the goal of promoting the transition to safer chemicals. While our decisions to transition from chemicals of concern should be made using the best available information, experience has demonstrated that most firms will not have the resources to complete such data and analysis intensive assessments will can most agencies. The reference document adds many elements to alternatives assessment that have not been traditionally a formal part of the practice. While on its surface this is not a problem and may actually add to more thoughtful alternatives assessments, it is important not to let the perfect be the enemy of the good. The goal is to make the best substitution decisions using the best available information. While having good information to avoid unintended consequences is important, more detailed, quantitative information does not necessarily lead to better decisions. Expert evaluation and judgment may also play key role.
- <u>Eliminating the golden rule and principles</u>. As alternatives assessment principles have not been widely agreed to, it would be useful to drop them at this point. These principles, while reasonable may be better termed as goals and objectives of an alternatives assessment and should be stated in less "directive" terms. Any use of "directive" language should be removed from the document
- <u>Simplifying the reference document.</u> As it currently reads, the document is dense and hard to following many places. It is simply difficult to know which sections to read and in what order. How the summaries in the first part were separated from the more detailed appendices is unclear. There are many structures/divisions/headings in the document that are not parallel in nature. There are also a number of grammatical errors throughout the document. At present, the document does not flow or connect well. It seems to have been written by committee.

Parts of the document, such as the decision-modules are exceptionally complicated and

academic and in many ways not very useful. For example, while the diagrams describing the three frameworks are useful and relatively clear, the supporting text is confusing and academic. The difference between frameworks and methods is unclear. The two approaches to comparing alternatives could be more simply described and outlined.

Changing the document structure as suggested by the Biz-NGO working group could simplify the document: identifying and prioritizing chemicals of concern (a new module); identifying alternatives, and comparing alternatives. A last section, implementing alternatives, could be added. Stakeholder engagement and decision-making could be stand alone modules outside of the proposed new steps – not what is currently termed scoping.

- <u>Add more reference materials, if the document is to become a reference document</u>. A reference document should have links to tools, cases, and examples where the reference guide or similar documents have been applied.
- <u>Redrafting or eliminating the How to Implement Guidance section of the document</u>. The current section is confusing and while the charts and short description of the individual modules are good, the theoretical frameworks discussion makes the section too complicated. I would suggest the development of a section based loosely on the IC2 Wiki which has simple, though powerful and easy to understand graphical representation of the alternatives assessment process from chemical prioritization through implementation. That level of description and simplicity step 1, 2, 3 are what small and medium sized companies and many state governments need (the supporting material could be integrated into appendices). I would suggest another reference document that is shorter and does not consist of multiple modules, but rather outlines the process steps and provides references for further information.

I will be working on more detailed comments on each of the modules in the coming weeks. I hope these comments are useful in your review process. Again, congratulations on the foresight needed to move such an ambitious document.

Sincerely,

Joel A. Tickner, ScD