Response to SAB/BOSC Charge Questions from Thomas Burbacher

1 ORD's Strategic Directions

1a. Considering the proposed research directions and focus, how well is ORD as a whole poised to support EPA in meeting the goals of the EPA Strategic Plan?

Judging from the innovative and comprehensive individual Strategic Research Action Plans, I would say the ORD is well poised to support EPA's overall Strategic plan. There are a few areas that I believe would be worth discussing regarding this issue. First, while the scope of the work described in the StRAPs is impressive, it is hard to judge whether or not the scope is consistent with current and future resources for the program. In a time of diminishing resources, there may be a need to prioritize programs and activities. Some discussion of this would be worthwhile.

Another aspect related to limited resources is leveraging. The documents list an impressive number of "partners" for ORD activities. It would be good, however, to have some discussion of whether additional leveraging would address some of the tight resource issues. The partnership with NIEHS on the Child Health Centers is a good example of leveraging. Are there additional opportunities with NIEHS or other NIH institutes? Are there barriers to partnering with private institutes such as Systems Biology?

The StRAP for Chemical Safety and Sustainability indicates that nearly half of the program's resources will be going to research translation and Knowledge delivery. I do not know if this is common across all of the StRAPs. It was difficult for me to get a clear sense of the priorities for this aspect of the program and to judge whether or not innovative research and procedures were being used to accomplish the goals. In several places in the plan and the ppt that was provided there are references to increasing the awareness of the general public, risk-based decisions by the general public, "democratizing" science and strategic engagement of stakeholder communities. From the description of activities provided, it is not clear to me how these goals would be accomplished. Most of the activities seem to be focused on engaging and knowledge transfer to scientists who may be interested in using the products that are developed. Less clear is whether or not there is research and/or effective strategies for engaging communities.

1b. What are the SAB/BOSC perspectives overall on the proposed research directions providing research to address environmental issues of 2020 and beyond?

As mentioned above, the scope of work described in the individual StRAPs is impressive and in keeping with addressing the environmental issues of 2020 and beyond. Beyond my comments above regarding setting priorities, leveraging, and providing a clearer plan related to research translation and knowledge delivery, I would like to hear more about how the various activities will be evaluated and validated. Most importantly is how will the tools developed be evaluated in regards to how they impact decision making and whether or not these impacts make a difference. For example, will changes to provide more-timely decisions about chemicals provide more or less assurance to agencies and the public that these decisions are in keeping with protecting public health. Is research being done to address how best introduce these new tools to potential users and the community that would indicate they would be accepted.

6 Chemical Safety for Sustainability and Human Health Risk Assessment Charge Questions:

6a.Please comment on approaches the HHRA research program might target to better tailor its exposure and response assessment approaches to address fit-for-purpose characterizations (e.g., risk prioritization, risk screening, risk assessment).

A number of innovative approaches and tools are described to address fit-for-purpose characterizations. As mentioned in response to question 1a, it is not clear how these approaches will be evaluated and validated in regards to how well they address to goal of better and more transparent decision making.

6b. Please comment on approaches proposed by CSS and HHRA research programs to identify and integrate novel data streams to develop innovative fit-for-purpose assessment products.

The program thus far has done an excellent job of identifying and integrating novel data streams to develop innovative fit-for-purpose assessment products and the future plans are in keeping with this history. My comments to question 1a bring up issues of prioritization, leveraging, and procedures for research translation and knowledge delivery that could be better addressed related to these products.

6c. Are there other areas of fit-for-purpose characterizations (e.g., risk prioritization, risk screening, risk assessment) that are ripe for such collaboration/ integration?

As mentioned in response to question 1a, it would seem that there are additional opportunities for the program to leverage it's activities with other programs. The successful collaboration between EPA and NIEHS regarding the Child Health Centers is a good model. Are there barriers to collaborating with private institutions such as Systems Biology?