NANORELEASE STEERING COMMITTEE 2ND FACE - TO - FACE MEETING

September 14, 2011

Participants: Yasir Sultan, Darrell Boverhof, Jo Anne Shatkin, Chuck Geraci, Shaun Clancy, Rick Canady, Bill Kojola, Steve Froggett, Cathy Fehrenbacher, Myriam Hill, Debbie Kaiser, Vladimir M, Michael Hansen, Carolyn Cairns, Janet Carter and Treye Thomas

Agenda:

- (1) Refine the MWCNT Project Objective: This would be used for use in outreach and communicating our goals to collaborating labs, parallel projects and retain the group's focus as we move forward.
 - Recognizing the importance of this effort, the group devoted considerable attention and time to revising the objective statement.
 - During the discussion, there was general agreement that the SC should also agree on the use of several specific terms. These terms would be defined and made available on the NR project website.
 - Two key terms requiring definitions were "article" and "product".

Product is defined as the commercial base material that is used to fabricate articles. An example of products are solid blocks of MWCNT/polymer matrix material and polymer pellets impregnated with MWCNT.

Article is defined in the NNI 2011 EH&S Research Strategy as a finished commercial item, e.g., a tennis racket or car part, fabricated from a product. Typically, different companies fabricate products and manufacture articles.

- In addition, the group generally agreed that it would be helpful to add a diagram on the website displaying a "value-chain" for MWCNTs. In addition to highlighting the various steps in the manufacture process, the diagram could illustrate which materials would be selected and used for testing during the two Tiers of release methods testing/development.
- One suggestion for the diagram was to make it interactive such that clicking on a point along the chain would open a small window that listing all the synonyms used to identify a particular material.

(2) Task Group Modifications: In addition to revising the draft Task Group objectives, the group identified a need to draft an overall "framing" statement for the expert process.

To help focus the SC, a general overview of the Expert Process was discussed

- 1. Each of the task groups will endeavor to draft a white paper.
- 2. Afterwards, those white papers will be pulled together to build the state of the science paper. As such, each of the task groups will have a degree of redundancy, but this overlap may be helpful and informative.
- Based on the overview of the process, the group agreed that some of the group's efforts will be mostly evaluations of existing information (i.e. methods needs and uncertainties) and the resulting papers will highlight the current state
- The Task Groups (TGs) should be expected to provide feedback on each other's work to the SC and to the other TGs. It's likely that one TG will identify a need that could be best addressed by another TG.
- The SC discussed the value of prioritizing the work of the expert process.
- One suggestions was to stagger the start dates of the TGs, starting TG 3 first since the work of TGs 1 & 2 are partially dependent upon the TG 3. Alternatively, all of the TGs could begin work simultaneously, but TGs 1 & 2 would begin with a more generalized charge/direction, that could be focused by the work/findings from TG-3.
- It was generally recognized that the greatest task falls upon TGs and that their findings will help refine/update TGs 1 & 2 efforts.

TG 1 (Measurement Methods):

- This was the first charge the group discussed and the group agreed that many of the suggested revisions that apply to this charge were to be carried over to the other two charges without further discussion.
- The group had an in depth discussion about ENM "transformations" that will be considered within the scope of the project.
- There was general agreement that "proximate" (i.e. immediate transformations that inform the quality and nature of the released material) were to within the scope and to be considered.
- However, there were concerns expressed that if the group is going to consider the life cycle, then proximal environmental transformations may be lost. The long-term environmental transformations are then beyond the scope of the project. Does this cause a reconsideration or need to re-define, what the group considers "life-cycle"?
- The group agreed that there should be focus on the release event and (perhaps) how much was released during that event.
- There's also a recognition that there needs to be monitoring of the release scenario (characterizing the method applied that induces the release)

TG 2 (Materials):

• The group agreed that the current draft was in good shape.

<u>TG 3</u> (Release Scenarios):

• The charge for the group needs to identify and evaluating the potential release scenarios of greatest relevance to exposures along the life-cycle.

(3) Experts / Labs spreadsheet:

See follow up items

(4) Information Management:

- Discussion then turned to authorship of both the individual TG white papers, and the integrated State of the Science Paper.
- The group agreed to take up this discussion in a subsequent conference call.

(5) Discussion of the CRADA:

- The SC agreed that going forward required drilling down and identifying specific labs for collaborations during Phase 3 of the project needed to be accomplished soon.
- Initial discussions about the CRADA began with EPA and ILSI, but more recently these have evolved and broadened.
- The group agreed on the need to layout the steps we plan to follow leading up to inter-lab testing and beyond. So that the laboratory and project managers have a concept of what to expect and when.

Tentative Timeline:

- Over the next 3-4 months the TGs will be developing the white papers.
 And about half way through this process, the authors of the state of the science document will begin drafting.
- Roughly in March, we will have enough of an understanding of the scope described by each of the TGs that we can begin to outline the Phase 3 steps and draft these expectations into the CRADA
- Also in March (2-3 weeks prior at the latest) the white papers need to be done and out for review by the participants of the Expert Workshop.
- These efforts will result in an Expert Workshop tentatively in April/May – the objective of the workshop will be to develop/finalize the study plan for Phase 3.
- The CRADA would go into effect in June, where we begin convening the lab heads/reps, and begin the refining of the methods / study plan. (3rd quarter 2012)
 - Need to describe resource commitments
 - Hypothetically: 3-4 release scenarios, 3 methods tested, done in the first round of evaluation.

- Subsequent evaluation rounds may amend these scenarios and/or tests.
 - Components of work plan:
 - Suppliers, transport of test supplies from one place to another
 - The testing labs or sets of labs (abrasion done in one lab, evaluation done in another)
 - Data management and evaluation (informatics)
 - How the SC and TGs receive and evaluation the info drawn out of the data
 - Dissemination of information to the public (how and when)
- 4th quarter 2012
- Testing of tier one begins
 - Three rounds of testing to get the methods refined (~ 6mo)
 - Tier two is testing articles (likely one round)
- In addition to identifying partners, the SC needs to define responsibilities for each of the steps in the project.

Next Steps:

- 1. The group identified a need to draft a "framing" statement for the expert process.
- 2. Develop glossary of terms and a graphic to illustrate the MWCNT "value chain" for use on the website.
- 3. By the end of next week, Rick will begin sending emails out to invite experts to invite based on the suggestions of the SC.
- 4. Steve sends an email to SC requesting folks to specifically identify the labs the SC would like to establish collaborations.
- 5. Final approval of revised NR site, including value chain diagram and glossary.
- 6. Steve drafts timeline for CRADA and circulates to SC