

## **Green Chemistry Education Project Group Call November 27, 2012**

*Present: Amy Cannon, Beyond Benign; Pam Eliason, TURI; Michelle Gaither, Pacific Northwest Pollution Prevention Resource Center (PPRC); Rich Helling, Dow Chemical; Kathleen Hurley, Actio Software; Alexis McDonald, New Balance; Mark Myles, TURI ; Brian Penttila, PPRC; Alex Stone, Washington State Department of Ecology; Phyllis Strong, Minnesota Pollution Control Agency; Homer Swei, Johnson & Johnson*

### **Goal of call:**

We would like to get a discussion going with interested GC3 members in order to organize a training on Green Chemistry and Alternatives Assessment, building on discussions at the May GC3 meeting.

As a group, we would like to identify the following before pulling together curriculum for the training: Target Audience, Objectives and Training Topics.

Amy gave an overview of the target audience, objectives and training topics initially identified through small group discussion. The discussion included the following:

### **Target Audience:**

Initial discussions with a small group have identified the target audience as business professionals that may or may not have science (or related) backgrounds. Deep dives in to topics that contain more science related information can be done through breakout sessions within the workshop.

### **Objectives:**

Initial discussions have identified the following objectives for the training: to provide an overview of the module topics to a wide audience, with deep dives for particular audiences that require further knowledge in particular areas; to provide a training that helps participants understand how alternatives assessment and green chemistry differ and where they overlap, allowing participants to understand when each apply within a product lifecycle; to provide working case studies that present the business case for green chemistry and safer chemicals.

Through our initial discussions with a small group, the following training topics have been identified as topics of interest:

### **Training Topics:**

- Green Chemistry
  - Intro to Green Chemistry
  - Advanced Green Chemistry
  - Green Chemistry Metrics
  - Innovation in Green Chemistry
- Toxicology 101
- Alternatives Assessment
  - Design for Environment

- o Life Cycle Assessment
  - o Pollution Prevention
- Laws and Regulations
  - o Environmental Laws and Regulations
  - o Compliance, standards, labeling
  - o Hazard communication
- Making the Case
  - o Business Case Studies and Models
  - o Green Marketing

Notes:

- There is an unmet need for communication between suppliers and customers (and vice versa). How can we communicate green chemistry and safer alternatives between these parties and deliver it in a useful format.
- Also unmet need for internal communications between different professionals internally in companies – different groups might not know how to talk to each other about these topics, can the training address internal needs also?
- Help suppliers communicate why their ingredient might be better than another from sustainability perspective
- Could the training topics and modules be broken in to level 1, level 2 and level 3 topics, with the level one begin introductory subjects, level 2 going in to more detail and level 3 be working sessions where all the information is used together for working case studies applied to businesses
- A good format might be to have a regular webinar series (once a month?) to go over background information (level one background topics), then level 2 and 3 can be the in person working sessions.
- Can we have a workshop where there is a product that come out of the workshop that can be used by companies (i.e., working case studies that help companies communicate both internally and throughout supply chains)
- Look in to other resources that are out there: UC Berkeley GC Intro series, and CPA's Green Screen training (which has a 1.5 hr background on hazards and toxicity end points), ACS GCI's Green Chemistry 101 and 201
- Having the training in modular formats is a good idea
- Communication up and down a supply chain is an unmet need and is the goal of the GC3, so this should be a main focus for training
- What are the key questions for each group within an organization: manufacturing, developers, suppliers, marketing, etc. And, how can we communicate between these groups
- Business case studies and models will be most valuable and can provide as basis for training and means for applying knowledge from level 1 topics

Summary and Next Steps:

- There was good agreement on the subject of regular webinars for “level one” background topics – we will look in to how to set this up
- There was also good agreement on the nature of a training to focus on both internal communication between different business professionals, as well as external

communication between businesses (i.e., supply chain communication). We will look in to how to set up trainings that use case studies in order to achieve this

- We will assemble a team to begin to structure the training and assess how much curriculum development work will be needed – if anyone is interested in being more involved with the development of the curriculum, then please let Amy or Sarah know.
- We will hold a follow-up call with a small group (anyone is welcome) in order to discuss next steps towards developing curriculum for training