TURA Ad Hoc Committee Meeting, April 29, 2021

Meeting Attendees

Ad Hoc Committee members

***Larry Boise**, Franklin Paint
Lauren Bradford, Cabot/ACC
Tom Estabrook, TNEC, GRACE-MTA/UML
Andrew Goldberg, MA AGO
***Wendy Heiger-Bernays**, BUSPH, TURA SAB
Andy Irwin, Irwin Engineers
***Bill Judd**, Industrial Compliance Group
Terry McCormack, Umicore
***Mark Monique**, Savogran
Jim Reger, MAAPA
Rick Reibstein, BU
Kathy Robertson, MCTA
Mark Rossi, Clean Production Action
Elizabeth Saunders, Clean Water Action
***Lucy Servidio**, Capaccio
***Laura Spark**, CWA
Matthew Taylor, Dupont

Other Advisory Committee members

Magdalena Ayed, Harborkeepers
Karen Blood, Hollingsworth and Vose
Becky Weidman, MWRA

Administrative Council members

Greg Cooper, DEP

TURA program

Richard Blanchet, DEP
Lynn Cain, DEP
Veronica Wancho O'Donnell, DEP
Caroline Higley, EEA
Caredwen Foley, OTA
Michelle Spitznagel, OTA
Tiffany Skogstrom, OTA
Hayley Byra, TURA
Pam Eliason, TURI
Liz Harriman, TURI
Rachel Massey, TURI
Greg Morose, TURI
Heather Tenney, TURI

Other attendees

Kristine Davies, Trinity
Robin Dodson, Silent Spring
Erin DeSantis, ACC
Harry Hechehouche, ACC
Carol Holahan, Foley-Hoag for ACC
Molly Jacobs, Lowell Center
Tricia McCarthy, Coyne PC for ACC
Clint Richmond, Sierra Club

**Denotes members of the AHC who also sit on the Advisory Committee*

*Absent: Jay Kaufman, *Elise Pechter, Bob Rio, *Jodi Sugarman-Brozan*

Minutes

Welcome and introductions: Members were welcomed and introduced themselves.

Approval of minutes: Minutes approved.

Presentation: TURI staff delivered presentation on the TURA Toxic and Hazardous Substance list. A summary of the discussion following the presentation follows

1. Do you make use of the TURA list in your work? Do you make use of other chemical lists in your work?
    a. A member asked whether Massachusetts lists any chemicals that are not on other lists.

i. TURA program staff responded that Massachusetts doesn't really list any substances that NO other lists include, but that we were a leader with respect to, e.g., n-propyl bromide.

b. A member commented that he does not consider IARC or Prop 65 to be suitable sources as authoritative lists, because IARC uses an overly aggressive strategy to pull in chemicals not in step with current toxicology, and Prop 65 is insufficiently rigorous in filtering out substances. A review of TURA's list in comparison to other authoritative bodies should consider quality analyses. I would propose EU Substances of Very High Concern under REACH.

c. A member expressed support for the idea of having a list of lists. Many companies have watch lists and want to use a more precautionary approach. All are using those authoritative lists, including Prop 65 and IARC, EPA PBTs, REACH. Regulations are likely to head where companies' customers are. It is helpful for TURA to create an informational list that accommodates advancements in toxicology.

d. A member noted that the context for this discussion concerns manufacturers paying a fee to use certain substances.

e. A member indicated that his company does not consider TURA's list when considering what substances are appropriate to bring into manufacturing, and relies on the company's own internal research.

f. A member noted that he had discussed TURA's list with an environmental program in another country that was interested in TURA.

g. A member stated that an EHS dashboard she uses with clients includes lists of lists (including TURA), so that when clients put in the chemicals they use and their constituents, it looks at which of them appear on those lists. Very helpful to be able to use this instead of cross-referencing spreadsheets.

h. A member stated that he uses many chemical lists, including TURA, and that there useful aspects to all of them, particularly lists of chemicals of emerging concern that give an idea of where regulations might go. Those lists are at the cutting edge because other people around the world are looking at them.

i. A member stated that the TURA list has also been used to inform outreach and education to provide public health protection. TURA list highlights where to look for other opportunities for consumer and public health protection. Many other state-based lists are also excellent, as well as the EU.

j. A member noted that the TURA list is used in emergency response training. Some trainers use the TURA and CERCLA lists to stay apprised about common hazards in manufacturing and to make trainees aware of what they might encounter.

k. A member stated that the TURA list and other lists are also used in the context of research; for instance, to identify gaps in the toxicological, exposure, or epidemiological literature. By comparing the TURA list with other lists mentioned by others, we can write grants to fill in some of the missing information about absent toxicology. NTP is now part of NIH, which is now doing the majority of our funding. It is used in teaching for examples of regrettable substitution or green chemistry, for organ-specific toxicology. The TURA list and some of the others inform our training of the next generation.

l. A member indicated that CAMEO's chemical list is a helpful resource. Although it's a bit outdated with respect to toxicology, it's more widely used than any other modeling program in the US. EPA, DEP, fire chiefs in larger metro areas use their list.
m. A member stated that, for his company, lists with significant regulatory force have the most force for us. The EU list is now considered the leader. We also try to look ahead to anything that might restrict products made with these.
n. A member identified additional useful chemical lists: Green Screen/Healthy Building uses 40 different authoritative list. We use screening lists of emerging contaminants. ChemSecs's Substitute It Now list is a good resource. Those lists are embedded into the Health Product Declaration Collaborative, which is used for chemicals sold in the building space.
o. A member cautioned that current lists are not inclusive of all chemistries. The downside of lists is that when you enumerate dangerous substances, it gives the idea that other unlisted things might be perfectly safe. Lower- and higher-hazard listings can help companies prioritize. Consider what incentives we give to companies to use lower-hazard chemicals.

2. What feedback do you have on the usability of the information?
    a. A TURA program staff member, in chat: "The only issue I sometimes come upon is with certain glycol ethers and having to look at a separate list for those chemicals."
    b. A committee member, in chat: "It would help if the TURA List of Chemicals search function would also support the original format of a CAS number like 1310-73-2 and as well as support the current function without dash marks 1310732 (Sodium Hydroxide)."
3. Do you have suggestions for how best to approach updates to the TURA list?
    a. A member stated that one of the pros for consulting other lists is that TURI and the SAB only have so much time to review, so they can't keep up with everything. Not all the authoritative lists apply the same degree of scrutiny that TURI and the SAB do. Make sure the standards for the authoritative lists are aligned with MA/EPA's own standards.
    b. A member said that the act is clear that no more than 10 substances may be added in any one calendar year. Are we talking about adding all these substances in a broad stroke?
        i. TURA program staff clarified that we want to encourage members to think creatively. While we hope we can make improvements without changing the regulations or statute, we do not want to restrict discussion to ideas that don't require changing them.
    c. A member asked about the procedure for delisting substances.
        i. TURA program staff responded that the delisting process is noted in the Decision-Making Document. Petitioners must submit a petition and a toxicology search on the chemicals they would like to be delisted. This petition would go to the SAB and be supplemented by additional toxicity info from TURI. Then it would be discussed by the Advisory Committee and the Administrative Council.
    d. A member pointed out that the 1993 reporting guidance from DEP is apparently still in effect, precluding reporting on phthalate esters. Have we considered revisiting it?
        i. TURA program staff indicated that this is being considered. Another committee member agreed with revisiting reporting on phthalates.
    e. A member agreed with others that an advisory list as a resource, especially for smaller companies, is welcome, but that this does not require adding substances to the TURA list.

Best way to help smaller companies is to alert them about emerging chemicals to help them head off using them.

f. A member stated that utilizing other lists to inform expanding our TURA list is an important conversation. The SAB is excellent and thorough, but this makes it hard to keep pace with emerging science, in terms of adding hazards as quickly as they are identified. It would be helpful to streamline and expedite a process for adding substances from a trusted resource. Replacing BPA with BPS does not keep pace with toxicological knowledge and results in regrettable substitution and wasted effort by both the agencies and by companies.
g. A member stated that MA should look at those authoritative bodies it is most aligned with. What are the challenges to HHS designation? Is there a pathway of looking at sectors may be using HHS to accelerate process? Through what criteria do chemicals get on the list, and at what levels are these chemicals being used?
h. A member stated that the TURA program's value is maintained by keeping it updated. Ensuring that the list is updated with other lists needs to be addressed. Comparing our list's standards with standards for other lists, as another member suggested, is a good idea. This could help ensure that TURA stays up to date.
i. A member agreed with the suggestion of a "Venn diagram" approach: include the criteria/rationale for including substances on the list, and use those criteria to determine whether it makes sense to add chemicals to TURA. Can we have a streamlined process to use the SAB to bring specific substances onto the list in a more expedited way? If there are scientifically, politically, or economically questionable reasons for substances being listed or not listed, those could receive more scrutiny from the SAB. For example, some of the California chemicals have questionable data. However, other chemicals don't get listed because the toxicological evidence comes from academic literature but not laboratory literature: they might not meet the criteria for a list, but the data themselves aren't bad or wrong.
j. A member suggested that it would help to have lists across states more readily searchable and aligned. It would be great to be able to search across multiple lists in one place.

4. Are there particular substances that should be considered a high priority for TURA list addition or HHS/LHS designation?
    a. A member suggested prioritizing bisphenol S, PFAS chemicals not otherwise listed, and flame retardants (at least the organohalogens, but examine the full range).
    b. A member suggested expedited review/inclusion process for known carcinogens in the IARC group 1 and for endocrine disruptors.
    c. A member encouraged caution with respect to using a category approach because there is variability in hazards among broad classes.
        i. Another member replied that some things are in classes because there are similarities. Listing categories is not merely expedient from a regulatory standpoint; it is more protective from a public health standpoint. The previous member clarified that he does not have a blanket objection to categories, but wants to make sure they're applied with forethought.
    d. A member suggested that SAB examine the class approach and determine where gaps exist in terms of classifying similarities within a group (as for bisphenols, ortho-phthalates, PFAS, siloxanes, alkylphenols). It's important for the SAB to identify gaps in the current listing to

see what's relevant for high priority substances. We should also be considering mobility and persistence – those should be prioritized.

e. A non-member attendee commented that we are regulating some PFAS in drinking water, but not on the TURA list. Fluorosurfactants are widely used. Maybe we could do perfluorinated carboxylic acids as a group, but we should look at them as a group and at least catch up with the drinking water standard.
f. A member suggested considering how TURA listings interact with other regulatory processes. The member stated that a significant number of pharmaceuticals would fall under the PFAS category, and that having them both approved by a federal agency and included on a TURA list as part of a class seems like mixed signals.

5. Do you have input related to current TURA thresholds?
    a. A member stated that, from a processing and recordkeeping standpoint, mass thresholds are easiest to deal with. Mass balance tracking is already employed so those definitions are easiest. Things like number of fibers would be much more burdensome.
    b. A member stated that generally he supports mass thresholds, but that since nanomaterials are so small, we might need to consider a lower threshold, because TURA enables that for higher-hazard substances.
    c. A member asked for clarification about whether we were discussing listed chemicals in nanoform, or nanoparticles as a generic listed substance.
        i. TURA program staff clarified that SAB is considering a petition to list single- and multi-walled carbon nanotubes and nanofibers.
    d. A member stated that it may be important to consider lower thresholds to reflect the impact of discharges on drinking water. Sometimes very small amounts can render water unsuitable to drink. That outcome might be worth specifically considering when thresholds are being determined. Also, agree that we need to consider nanoparticles specifically because they will never hit the existing thresholds.
    e. A member stated that the underlying chemistry and the form should be relevant to the threshold. We have zinc fume or dust – the form helps determine the hazard. Identifying a class of materials needs to regard toxicity of the specific form AND the specific chemistry.
    f. A member stated that we need to consider both acute effects to workers and downstream environmental public health effects. Maybe those thresholds are different. How much is needed to harm a worker's health isn't the same as the amount that can contaminate an aquifer.
        i. A member asked whether certain chemistries might be reportable in one case but not another. The previous member clarified that she was not proposing that, but that different hazards to different receptors may warrant differences in thresholds.
        ii. A member stated that thresholds now are "this is where you start reporting and fee obligations." If we move to a public health-based threshold, would those evolve? How would the PH values play into the impacts of TURA listing? The previous member stated that she would argue that the intention of TURA IS to protect public health. All of these lists start from what are the chemicals that are more or less toxic, and why do we care? We care because they're dangerous to public health. The basis for any of our environmental regulations is protection of health and the environment.

g. A member pointed out that SAB is empowered to distinguish the chemistry and the form: When the SAB looked at silica, it's freshly-fractured silica that's listed. The SAB has the ability to look at form.
h. A member noted that nanomaterials were not conceived of when the statute was written. It's not going to reach the existing mass thresholds, so they should be lowered.
i. A member asked: We use sulfuric acid that is completely consumed in the process, because we're not releasing a chemical to the environment. Can we make allowances for chemicals that are entirely consumed on site?
    i. TURA program staff replied that part of TURA's purpose is also to protect workers as well, so TURA is also concerned with substances consumed on site.
    ii. A non-member attendee, in chat: "And you could still have a spill."
    iii. The previous member asked whether this is duplicative with other regulations (e.g., OSHA). Program staff responded that it may be helpful for everyone to review the TURA Decision-Making Document for a refresher on the TURA program's core principles.
    iv. A non-member attendee noted that duplicative efforts can be helpful, especially when there are multiple jurisdictions. A belt-and-suspenders approach can be valuable to ensure that people are protected even if federal requirements change, but that harmonization with neighboring states would be worthwhile.
    v. A member pointed out several aspects of TURA that are unique to Massachusetts and are not duplicative, such as in-plant use, tracking, comparing alternatives, and technical assistance.

6. Do you have other questions about the TURA List that we have not covered?
    a. A member noted the value of TURA data in other contexts – e.g., if you have drinking water contamination, you can review TURA filings to figure out where it is coming from.
    b. A member pointed out that CAMEO allows you to look at different receptors and see how they will be affected by a release. If you lose the contents of a tank, maybe the company could reduce how much they keep on site so that if they have an accident it won't affect receptors as broadly.
    c. A member observed that there have been many good ideas today (thresholds, lists of emerging chemicals, what is an authoritative list/source) and asked whether subcommittees or working groups could further flesh out these ideas and discuss, and indicated that she would like to participate in this effort.
    d. A member expressed support for thinking about how we evolve assistance to companies. The low-hanging fruit is gone. Now we are at things that are much more difficult, like PFAS, with no near-term paths to good alternatives. How can TURI be involved in some of these more pressing and unique circumstances?

2. Tiffany Skogstrom thanked the committee for their engagement and participation and announced that the May 13 AHC meeting on Fees may be rescheduled to a later date to provide more time between the potential Administrative Council meeting on May 10 and the Ad Hoc meeting.
3. Adjourn