TUR Advisory Committee
Meeting Summary
February 4, 2016
Saltonstall Building
100 Cambridge Street, Boston
Conference Room D

Members Attending: Mark Rossi (Clean Production Action), Joon Han (AB Cleaners), Steve Gauthier (IUE/CWA Local 201 General Electric), Bob Audlee (Stainless Steel Coatings), Ronald Westgate (Philips Lightolier), Bill Judd (Industrial Compliance Group), Lucy Servidio (Capaccio Engineering), Mark Monique (Savogran), Sylvia Broude (Toxics Action Center), Sam Lipson (City of Cambridge Public Health Department), Tolle Graham (MassCOSH)

Others Attending: Liz Harriman (Toxics Use Reduction Institute [TURI]), Rachel Massey (TURI), Heather Tenney (TURI), Tricia McCarthy (American Chemistry Council [ACC]), Margaret Gorman (ACC), Alix Pierre-Louis (Massachusetts Water Resources Authority [MWRA]), Tiffany Skogstrom (Office of Technical Assistance [OTA]), Katherine Robertson (Massachusetts Chemistry Technology Alliance [MCTA]), Suzi Peck (MassDEP), Rich Bizzozero (Executive Office of Energy and Environmental Affairs [EEA]), Danielle Domingos (OTA), Joy Onasch (TURI), James Dunbar (MCTA)

Welcome and Member Introductions

The Executive Director welcomed members to the meeting and introduced the newest Advisory Committee member, Mark Monique, from Savogran Company. Mark will be serving as a small-business representative for the Committee.

The meeting minutes from the September 22, 2015 meeting were distributed to the committee members. None of the members had changes or edits for the minutes and they were accepted by the committee. Two members abstained because they were not present at the September meeting.

Executive Director and Agency Updates

TURI

A representative from TURI distributed handouts on the Academic/Industry Research Partnerships and the Industry Incentive Grants program. The Academic/Industry Research Partnerships connect Massachusetts businesses with academic researchers within the UMass system. If committee members know of companies that would be interested in the partnerships, they were asked to contact TURI directly. TURI noted that industry incentive grants were still available for FY16 and suggestions from members for those can be sent directly to TURI as well.

The peer mentoring workgroup, coordinated by TURI and hosted by Siemens Healthcare, continues to meet monthly.

Upcoming events hosted by TURI include a Science Advisory Board (SAB) meeting, taking place on March 30, and the Spring Continuing Education Conference, which will be on April 14 in Chicopee. The planning for this conference is well underway and it was noted that MCTA is going to cosponsor one track with the needs of their members in mind.

A report on alternatives for enzyme stabilizers in cleaning formulations, *Chemical Alternative Assessment: Cleaning Solutions Formulations* is now available on the TURI website.

TURI's small business grants for this year have been awarded and the recipients are Merrimack Ales, a microbrewery in Lowell; Mike's Autobody in Fall River; and Rainbow Bears Childcare Center and WORD Inc. Child Development Center, both located in Fall River. TURI welcomes suggestions for other small businesses that may be interested in receiving grant funding in the future.

A representative from TURI provided an update on the federal Toxics Substance Control Act (TSCA) reform efforts currently in Congress. TSCA reform bills have passed in both the House and the Senate, and now the task is to reconcile the two bills. Several states, including Massachusetts, are monitoring the process closely. More information about TSCA reform, including an Environmental Council of the States (ECOS) report and letter from the Attorney General's office were passed around to Committee members.

MassDEP

The representative from MassDEP informed the members about the ongoing overhaul of the eDEP reporting system. The new eDEP system will now be web-based, as opposed to PDF-based. Experience with other reporting programs has shown that this is a much more robust system, faster and less likely to crash or require the use of particular browsers, which is a much more robust system. The conversion will be completed by April and available for this reporting year. In addition the TURP Application process is being converted to an online system, and should be available for use in the fall.

The planning and reporting guidance are being documents are also being updated. Because the substance of the guidance does not change from year to year, MassDEP is departing from past practice and no longer producing unique versions for each reporting and planning year. For reporting there will be a companion document that references the changes to reporting requirements such as the addition or deletion of chemicals, or changes in their hazard status or onetime events such as the current TURA Amnesty program or the new data system. The planning requirements do not have annual changes. If minor corrections are made, the date on the document will be updated.

MassDEP also provided an update on the reporting amnesty program. There was a recent mailing to approximately 1,000 facilities that could be subject under TURA, informing them of the regulation and the amnesty program. Approximately nine companies have already come into the

program via the amnesty and it is expected that this letter will generate several more. A representative from OTA added that OTA has received over 30 phone calls and multiple emails regarding the letter and asking for assistance in determining if they are subject or not.

OTA and Executive Director Update

A representative from OTA told the committee members that OTA recently mailed out a letter to approximately 300 Massachusetts facilities, reminding them that companies need to track chemical use at the 1000 pound threshold on January 1 for the four new higher hazard substances: n-propyl bromide (nPB), hydrogen fluoride, cyanide compounds, and dimethylformamide (DMF). A committee member raised the issue of additional cyanide compounds which are generated in some plating baths, and whether they need to be included in threshold determinations. It was noted that the threshold calculations follow EPA TRI reporting rules. The Executive Director agreed to send the cyanide guidance sheet developed by the program to that member for any additional input to make the guidance better. A Committee member asked about following the process of EO562, which is the review of all regulations, currently ongoing at the Governor's Office. The Executive Director noted that information on the regulatory review could be found on the Administration and Finance (A&F) website.

Tiffany Skogstrom was recently promoted into the position lead on chemical policy, outreach and grants. Currently, she is working on wrapping up the MassCAR grant, which updated the CRASH course guidance document for auto body and auto repair. Four of the six trainings have been completed and the final two trainings will occur in the month of February. Currently, 60 individuals have attended the auto body trainings and 18 attended the auto repair trainings.

Update: Trends in Perchloroethylene Use and Professional Wet Cleaning at Massachusetts Professional Garment Care Businesses

The TURA program staff presented an update on the trends in the use of perchloroethylene (perc) in the Commonwealth and handed out a summary of MassDEP dry cleaners Environmental Results Program (ERP) data. This update is a follow-up to an Administrative Council decision to monitor the chemical's use instead of designating a priority user segment (PrUS). A PrUS designation would have eliminated the 10 full-time equivalents (FTE) employee requirement. As an alternative to designating a PrUS, the TURA program worked with the Environmental Results Program (ERP) to build in guidance related to TUR, and the Council voted to institute a voluntary comparative analysis of perc alternatives by dry cleaners looking to replace their perc machines. This comparative analysis helps a dry cleaner evaluate the performance, cost and environmental, health and safety attributes of the various alternatives. If MassDEP finds that too many perc machines are being installed, they will make the comparative analysis mandatory.

Since 1998, dry cleaners have submitted ERP data to the MassDEP. Based on this data, there were 324 dry cleaners reporting to ERP in Massachusetts in 2015; a decline from 646 in 1998.

Between 1998 and 2015, 110 dry cleaners switched from perc to another method of cleaning, including nPB, acetal, professional wet cleaning, propylene glycol, siloxane, and hydrocarbons.

Currently, there are 444 operating perc machines in Massachusetts. Of these, the owners plan to replace 139 in the next 5 years, and 48 in the next 2 years. 73% of the ERP respondents believe that an alternative method is a viable option.

Following the discussion of the ERP data, a representative from TURI discussed TURI's dedicated professional wet cleaning grants, which provide funding and technical assistance to help dry cleaning facilities make the transition to 100% professional wet cleaning. Facilities that switch to professional wet cleaning use less electricity and water, reduce hazardous waste generation, and save money. Following the switch, grantees from this program hold demonstration events at the facilities to show other dry cleaners the technology. Recently, an event was held in Western Massachusetts. There were also attendees from Connecticut and Vermont that were interested in bringing the technology to their state.

A short history of the work with the dry cleaning sector was reviewed. In 2006, perc in dry cleaning was addressed in the TURI 5 Chemicals Study. In 2008, TURI hosted its first demonstration event in Lowell. In 2009, the TURA program listed perc as a HHS. From 2008 through 2015, TURI has awarded 12 grants to dry cleaners to transition to dedicated professional wet cleaning. Technical assistance and demonstration grants have also been provided. Each cleaner that receives grant money collects data that is then developed into case studies to share with other cleaners.

In 2012, an updated perc alternatives analysis was completed and a 4-page fact sheet created based on the results. Massachusetts wet cleaners have formed an informal professional wet cleaning workgroup to share information and learn from each other's experiences.

The work is spreading regionally as NEWMOA is taking on regional discussions and demonstration events. CT and VT are both now developing assistance programs similar to the Massachusetts program.

Draft Ethyl Acetate Policy Analysis

The draft policy analysis for ethyl acetate was distributed and discussed. Designating ethyl acetate as a lower hazard substance (LHS) would eliminate the per-chemical fee and communicate to businesses that the chemical is less hazardous than other TURA-listed chemicals. The document is being brought before the Advisory Committee for their input regarding the designation.

The major concern with ethyl acetate is the flammability. A committee member expressed concern that some small businesses could switch from a non-flammable chemical to a flammable one (ethyl acetate) without making all the necessary adjustments at their facilities. Another

committee member noted that ethyl acetate is less toxic than toluene and xylene, two alternative chemicals. It was noted that the LHS designation does not mean that the chemical is removed from the list of hazardous chemicals; it is still considered a hazard, just less hazardous than other chemicals on the list. A committee member noted that ethyl acetate use is currently going up in Massachusetts, and that the LHS designation could increase the use of the chemical further, which is something that the Committee and Council should consider. One member asked if ethyl acetate was the most flammable chemical that had been brought up for possible LHS designation and the answer is yes, it is more flammable (has a lower flash point) than any other currently designated LHS.

The following information was requested for consideration by the Committee at the next meeting: a) use trends of other chemicals designated as LHS, b) insight into the number of facilities in Massachusetts that would potentially switch to ethyl acetate if the designation occurred, and c) information on accidents that have occurred in facilities due to the flammability of the chemical.

Science Advisory Board (SAB) Update

A representative from TURI provided an update on the SAB's current work. See the attached update on pages 6 and 7 of this document.

2015 TURA Program Report to the Governor

The Executive Director provided an overview of the current draft of the FY15 TURA Program Report to the Governor and invited questions and comments from the Committee members. Members discussed what grants or outside revenue or funded projects were included in the financial section of the report, and whether it made sense to include more information. The Executive Director asked that any other comments regarding the draft be sent to him by February 25th.

Adjourn

Handouts

September 22, 2015 TUR Advisory Committee meeting minutes
Lower Hazard Substance Designation Recommendation: Ethyl Acetate Draft Policy Analysis
Summary of SAB's Current Work
Dry Cleaners ERP Data Set
Safer Alternatives Fact Sheet – Perchloroethylene
Dry Cleaners Switch from Perchloroethylene to Professional Wet Cleaning: Save Money, Improve Health, Please Customers
Academic/Industry Research Partnerships
Industry Incentive Grants Overview
Peer Mentoring Workgroup Overview

Summary of the SAB's Current Work

February 2016

Certain Halogenated Compounds Category, or C1-C4 Halogenated Compounds

This topic originated at the SAB when the SAB was reviewing nPB. The Board wanted to consider a recommendation that would encompass a larger group of structurally similar chemicals, in order to discourage against poor substitutions of similar, but unlisted, chemicals. The Board defined a category as a group of substances with 4 or less carbons, at least one halogen and only hydrogen as the other constituent. Data was reviewed for approximately 138 substances. Primary concerns are CNS effects & volatility. The Board recommended listing this category in November 2011.

Volatile Methyl Siloxanes

In June 2010, the Board began looking at substances that were known common replacements for then-designated Higher Hazard Substances, most specifically TCE and PCE. Amongst these common substitutes were Volatile Methyl Siloxanes (VMS). The SAB discussed two cyclic VMSs and one linear VMS over the course of several meetings. The Board recommended to list hexamethyldisiloxane (HMDS) and place it on the SAB less hazardous chemicals list in March 2011. The primary concern is flammability (flash point 1ºC). HMDS is used in cleaning operations. The board discussed 2 cyclic siloxanes, octamethylcyclotetrasiloxane (D4) and decamethylcyclopentasiloxane (D5), over the course of a couple of years, noting concerns but having difficulty getting sufficient information. In March of 2012 D4 was tabled and in March of 2013 the Board recommended no action for D5, while noting several concerns including uterine carcionomas in rats, potential effects on the dopamine pathway, and persistence and bioaccumulation issues. In the summer of 2015 TURI received comments from GreenEarth, a dry cleaning solvent brand, on the D5 rating in TURI's *Assessment of Alternatives to Perchloroethylene for the Dry Cleaning Industry*. TURI committed to reviewing new information on D5 with the SAB and is currently working on that. In addition, the Board is also looking at new information on D4.

Phthalate esters

In May of 2012, the SAB began work on the phthalate esters category. The phthalate esters category originated from the CERCLA list and has been on the TURA list since the program's inception. However, the category was not well defined and when the category was added in 1993 as part of the phasing in of the CERCLA chemical list, a DEP policy was put in place that exempted reporting of this category. The Board reviewed data and studies for 58 ortho-phthalate esters as well as several meta- and para-phthalate esters. Primary effects were reproductive and developmental effects, and liver effects. The Board completed their review of phthalate esters in September 2015 and TURI will be delivering their report to DEP shortly. The Phthalate Ester

work differs in that the phthalate ester category is already listed and TURI is providing this information to DEP so they can reevaluate their reporting policy.

Ethyl acetate

During the process of preparing the policy analysis for Higher Hazard Substances methylene chloride and nPB, ethyl acetate was noted as a possible replacement for some applications. Ethyl acetate was also on the SAB's less hazardous chemicals list. In 2013, TURI consulted with the SAB regarding this proposal. The SAB compared it to three acetates that had been designated as Lower Hazard Substances by the Council, and noted more concern because of its much lower flash point, but less concern with toxicity. The policy analysis for Ethyl Acetate as a Lower Hazard Substance will be presented today. The primary concern with Ethyl Acetate is its flash point of 24ºF.

Diisocyanates

At the time that TDI was recommended as a Higher Hazard Substance, the Advisory Committee suggested that EPA's TRI diisocyanates category be reviewed as well. This work was begun in 2014 and is likely to continue in 2016.