NEWMOA Hazardous Waste Inspector Training Conference Call – January 8, 2008

"State and other Information Resources for Substitution of Non-Hazardous Materials/Process Changes for Common Industrial Processes"

The call began at 10:00. Representatives from Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Vermont, U.S. EPA Region 1, and NEWMOA were present on the call.

Presentation on TURI Study.

The call started with a presentation by Liz Harriman of the Toxics Use Reduction Institute at the University of Massachusetts. Liz talked about a recent study TURI had performed concerning substitutes for five commonly used industrial hazardous materials. The following is a detailed summary of Liz's presentation:

- For a number of years, there has been an effort in the Massachusetts Legislature to pass a "Safer Alternatives" bill, but this bill has not yet passed. However, TURI was able to obtain state funding to evaluate five of the original ten chemicals proposed to be covered under the bill. The five chemicals included lead, formaldehyde, perchloroethylene, hexavalent chromium, and diethylhexyl phthalate (DEHP). The goal of the evaluation was to look for alternatives to replace/substitute them with safer alternatives.

- The evaluation process first involved getting together with a representative subset of the stakeholders/users of these chemicals. The purpose of this outreach was to get input on which uses of these chemicals were most important, and what the possible alternatives might be. The assessment process included an evaluation of the technical and financial feasibility of the possible alternatives, as well as the possible occupational environmental health and safety impacts. It was also agreed that any alternatives considered had to be commercially available.

- With respect to lead, the uses that were evaluated include lead used as heat stabilizers in electrical conduit and cable insulation, in fishing weights and sinkers, and in ammunition used at shooting ranges.

- The uses of formaldehyde that were evaluated included in composite wood products, in sanitation in cosmetology (required in MA), and in the preservation of biological specimens.

- Percholorethylene uses that were evaluated included dry cleaning and degreasing.

- Hexavalent chromium uses that were evaluated included various metal finishing applications.

- DEHP uses that were evaluated included plasticizers in various plastic products, especially products associated with medical or neonatal care. For this material, other

phthalates were evaluated as possible substitutes, as well as alternative plastics that did not require plasticizers.

- In summarizing the results of the process, Liz stated that there are definite trade-offs involved in these kinds of materials substitutions. It is therefore important to look carefully at the chemicals and how they are used, and not just seek to ban the chemicals outright. Every manufacturer/user has different constraints and issues to deal with in trying to reduce their use of these chemicals. For some, substitution may be relatively easy, but for others it may prove much harder.

Liz Harriman then took questions on the study. The following summarizes these questions and her answers:

- NY asked what the other five chemicals in the MA bill were. Liz replied that the other five chemicals were tricholorethylene, 2,4-D, organophospate pesticides, pentabrominated diphenyl ether (aka penta-BDE, a fire retardant), and dioxins and furans. However, she also pointed out this is somewhat moot now since the list of chemicals in the bill has changed since it was originally drafted.

- NJ asked if any of the stakeholders made process or material changes based on the study. Liz replied that she was not sure, but that the study did at least add to the body of available P2 information and research, and that the information has made its way to potential users. She mentioned that with respect to perchloroethylene, TURI is following up to see if dry cleaners can feasibly convert to wet cleaning to eliminate the need for this chemical.

- Bill Cass wondered if the study had specifically looked at research going on in Europe on replacements for lead solder. Liz replied that it had not, but that this issue is moving along on its own through work being spearheaded by the New England Electronics Consortion, who is looking into possible ways to phase out the use of lead solder.

- ME asked how this study dovetailed with MA's TURA Law. Liz replied that some of the five chemicals studies were already focus chemicals under the TURA law because they are PBTs. She also noted, however, that the study goes well beyond TURA because it looks at uses of toxics in products, not just use in commercial and manufacturing processes, and also because it looks at products that may be ultimately used out of state. At the same time, though, she acknowledged that the five chemicals were in fact chosen in part because of the possible TURA filing benefits for the stakeholders that participated in the study.

- ME pointed out that California has also taken action on formaldehyde and phthalates. The California legislature was apparently concerned that their state would get a lot of these chemicals "dumped" on them because they have been banned in so many other places (e.g., overseas).

- Terry Goldberg asked what TURI was doing regarding other ways to do alternatives assessments. Liz responded that this study has impressed upon TURI that it is important to look at the big picture versus looking at a simple drop-in replacement for toxics. That is, you really have to do a life cycle analysis to fully evaluate a particular proposed alternative.

- NJ asked if MA was considering future tax incentives for toxics use reduction. Liz replied that they were not, but that toxics users in MA are required to pay fees. Hence, if these users are able to reduce or eliminate toxics that are subject to TURA, their fees will reduce accordingly, therefore providing a similar financial incentive for toxics use reduction. She added that the bill, if passed, would include grants that may also assist individual users to implement projects for toxics use reduction.

- NJ asked how TURI distributed the information from their study to potential users. In particular, was it given to RCRA inspectors in MA? (There often seems to be a disconnect between P2 staff and field staff in states.) Liz responded that consideration was given to dissemination of the information, but the problem is that they did not specifically get funding to do such outreach. However, the TURI's Office of Technical Assistance has the information and passes it along to the people to whom they provide assistance. Liz was not sure, though, if MA DEP's inspectors know about this information. She indicated that there is an effort underway to have more cross-training for this kind of information transfer.

- ME commented that it specifically tries to keep its P2 and RCRA staff in frequent contact. This includes things such as cross-referrals between the two groups. The problem, however, is keeping up-to-date with all of the changes going on in the P2 arena.

Liz then posed a question of her own for the states on the call. Specifically, she pointed out that the study had looked not just at manufacturing operations, but also common products, and asked what other states were doing in this area.

- ME replied by outlining some of their work in this area. First, there was a Governor's task force that organized in 2006 that recently issued a final report providing recommendations regarding a comprehensive chemical use policy. The report specifically focused on consumers. ME plans to adopt a list of chemicals of concern, and establish the authority for the state to require manufacturers to report chemical use and restrict use when safer alternatives are available and affordable. Bills are currently being introduced in the ME Legislature incorporating several of these elements. ME is watching to see where this legislation goes and what kinds of opportunities it may offer. Also, ME has been looking at lead in children's products, and brominated flame retardants, and has passed legislation to address these issues. However, the ME Legislature seems to be tiring of addressing these kinds of issues on a chemical-by-chemical basis since it authorized ME DEP to ban any flame retardant (not just brominated ones). ME is also looking at Environmentally Preferable computer purchasing, and the elimination of the use of lead wheel weights on state vehicles.

Individual State Presentations on Resources for Material Substitution/Process Changes.

Bill Cass then asked the individual states to describe the kinds of tools and resources they had or were working on to assist in the substitution of non-hazardous materials or process changes for common industrial processes.

CT started by describing its various documents and programs. These included:

- Compliance Assistance/P2 Documents. CT's documents included (1) a comprehensive package of guidance for vehicle repair and body shops (the so-called "Pit Stops" Fact Sheets); (2) a series of P2 case studies for industry; (3) P2 videos on topics such as printing, parts cleaning, metal finishing; (4) a document for dental care providers entitled "The Environmentally Responsible Dental Office;" (5) "The Auto Recycler's Guide," a guidance for auto junkyards and recyclers; (6) guidance for metal finishers; (7) guidance for dry cleaners; (8) a "Clean Marina Guide" to assist marinas in reducing emissions from their facilities; (9) P2 guidance for facilities subject to CT's stormwater regulations to assist them in developing their stormwater P2 plans; (10) guidance for facilities subject to CT's aquifer protection law, which requires users of certain chemicals within designated aquifer protection zones to eliminate or reduce the use of some chemicals.

- Information on the CT DEP website. The CT DEP website has a number of links to external websites that CT has found to be helpful: (1) a link to the EPA document "An Organizational Guide to Pollution Prevention," dated August, 2001; (2) a link to the Parts Cleaning Magazine website; (3) a link to MA's TURI website; (4) a link to North Carolina's P2 web site; (5) a link to the Chemical Strategies Partnership website; (6) a link to the P2 Gems website; and, (7) a link to the NEWMOA A+P2 website.

- CT DEP's P2 Newsletter: CT issues a quarterly P2 newsletter called "P2 View" that addresses a wide variety of P2 topics. Back issues to 2000 are posted on the CT DEP website.

- CHER and other Health Care Outreach Tools. The CT DEP website has information and links relating to the Connecticut Hospital Environmental Roundtable (CHER), which is a voluntary association of environmental regulators and professionals working together to provide information and assistance to the health care industry on a wide variety of environmental topics.

- CT DEP's COMPASS Program. CT's COMPASS (*Comp*liance *Ass*istance) program was created to provide one-on-one compliance assistance for new and expanding businesses. It consists of an informational brochure, a handbook, and a toll-free telephone number that members of the regulated community may call for technical assistance.

- CT's RCRA Inspection and Enforcement Process. During inspections, field staff review processes and the materials used, ask about recycling and pollution prevention and waste minimization efforts, answer questions and offer suggestions, as appropriate, for potential

P2 opportunities that the company could investigate. Similar interaction can occur during the enforcement process, as well.

- CONNSTEP. The Connecticut State Extension Program (CONNSTEP) is a non-profit organization that is partially funded by state and federal dollars and is separate from CT DEP. It provides on-site P2 assistance for small manufacturers using field engineers that perform a site visit, document and evaluate facility processes, make recommendations, provide assistance with implementation, and evaluate the outcomes.

ME next described their information resources. In addition to their prior comments (see above), ME indicated that they had many resources that were similar to CT's documents and outreach tools. ME also indicated that they have a RCRA program compliance assistance referral process, and utilize PPIS grant funds to provide assistance on P2 issues. ME has a Conservation Challenge program with over 70 entities (encompassing about 150 facilities) that have signed up. ME also does a lot of EMS outreach, and has a "Step Up" program which uses a Project XL-like incentive program for companies that have good compliance histories. ME also has a mentor program, by which their Small Business Program provides technical assistance to small businesses. ME also has a Small Business Compliance Incentive Policy through which companies that have problems (but not major enforcement issues) can be referred by enforcement staff to P2 staff for assistance.

- A question was asked what developments had occurred with respect to ME's research and assistance in the area of pharmaceutical waste management. ME responded that there is a legislative committee looking at how to prevent the flushing of medications down the drain and explore alternatives for proper management. ME has also done collections, but these proved logistically difficult due to DEA restrictions on the handling of controlled substances, and also there was not sufficient funding to continue the collections on a broad scale.

MA described their resources and programs (other than those already discussed in the TURI presentation). MA hosted a conference on nanotechnology in collaboration with various regulatory agency stakeholders and business organizations (for more information, see the MA DEP website). MA offers assistance to companies that are interested in this subject. MA also has a school mentor program that hooks up professionals with schools that need help with hazardous materials management and other EH&S issues. MA is also focusing on energy efficiency and resource conservation. They are currently gearing up to offer workshops and individual help in this area.

NY next described their resources and programs. NY also recently had a nanotechnology conference in Albany, similar to MA's. The primary focus of the conference related to worker health and safety issues, but also included environmental issues as well. NY noted that while industry is spending billions on research into nanotechnology, they are only spending a tiny fraction of that on potential adverse EH&S outcomes.

- Liz Harriman noted that TURI is looking into natural nano materials, such as nano clays, which offer certain advantages over Bucky balls, etc., in that they are not as persistent in the environment.

NH was next up. NH noted that they have many of the same types of documents and outreach programs as CT. Some of the things they were doing that were different, however, included internal referrals, and cross-training for P2. They also have a P2 Guide. Also, in NH, there has been a trend away from their traditional manufacturing base toward a service economy, and so they have been looking at different types of facilities in the service sector such as ski resorts, marinas, health care facilities, auto recyclers, etc. NH also has a P2 internship program with the University of New Hampshire, in which they send students to companies to provide assistance. NH has also sought ways to obtain metrics to quantify reductions in releases to the environment. NH mentioned that it heavily recommends a web site called P2 Rx. NH also works with trade associations as a way to access different economic sectors. One in particular was PINE, which services the printing sector. NH also uses NEWMOA as a resource, and has its own environmental leadership program.

The next state in line was NJ. However, no one from NJ's P2 program was on the call, so NJ could not provide any specific information.

NY next discussed their programs and resources. NY mentioned that it has received five applications for grant money from their P2 Institute. NY is starting a P2 student internship program, and companies that were past environmental excellence award winners in NY will get priority in getting these interns. There are also several initiatives underway from the NY Governor's Office: (1) a safe procurement program; and (2) an evaluation of the potential toxicity of nanotechnology. NY is also partnering with Clarkson University to hold a Green Engineering and Green Chemistry Conference. NY is hopeful that this conference will allow them to get some of the newest and freshest P2 ideas out to NY industry.

RI was not present on the call, and so we skipped on to VT.

VT described their programs and resources. VT's RCRA program works closely with its P2 staff when out in the field on inspections. VT indicated that its environmental assistance office could do a better job of cross-training of RCRA staff, however. There is a bill in the VT Legislature to promote safer alternatives. VT is therefore interested in the progress of MA's bill. VT also has a bill on flame retardants similar to ME's. VT also has a toxics use and reduction planning law, like MA's TURA. This allows VT to work with industry on alternatives, and get data back on the success of their efforts through the annual reporting required under this law. VT noted that finding alternatives to materials and processes in the manufacturing sector is a challenge, since can be very site specific. On the service sector/small business side, VT has guidance for compliance assistance with P2 information included in it. VT indicated that it usually picks a sector or two at a time to work on. Recently, VT has been looking at vehicle repair. In general, VT noted, it would be helpful to do more to reach out and coordinate with their RCRA staff.

Additional Discussion.

Bill Cass posed a question to the group. He asked if it might be a good idea to work this P2/RCRA staff cross-training idea into the NEWMOA annual face-to-face training somehow.

Region 1 asked if there was going to be further follow-up to TURI's report. Liz Harriman replied that the Safer Alternatives bill has moved out of Committee and has moved on to the MA Senate. It is expected to pass the Senate soon, and then proceed to the House. It is likely to be final in the next year or two. There is currently no funding to follow up on the study, but once the bill passes, there will probably be money allocated to do more research and follow up. TURI is, however, following up on wet cleaning alternatives for dry cleaners at this time.

Terry Goldberg metioned that for the last couple of years, NEWMOA has had an in initiative to look at chemicals of concern, etc. Although the funding for this effort is ending, there is still interest in this topic. NEWMOA is therefore wondering what kind of additional work would be valuable for the states. Should future efforts include more RCRA program people? NEWMOA has provided training in the past to assist RCRA staff in providing P2 assistance to companies.

CT suggested that it might be fruitful to "mine" RCRA inspection and enforcement staff in the NEWMOA states for ideas on different problems or needs that they have encountered in their work that might be good areas for further research. These inspectors are out at hazardous waste generators and other handlers on a daily basis and may have encountered some issues or problems for which they have not been able to offer effective solutions. These issues might, in turn, make excellent candidates for discussion and research.

Terry Goldberg mentioned that one resource for such situations might be their Rapid Response Service. By using this service through the NEWMOA website, users may ask questions or raise issues that NEWMOA staff can quickly research and get back to the user with information (if available), or give potential contacts that might be of help.

Bill Cass mentioned that it might be possible to work some of these types of ideas into the annual face-to-face inspector training. Bill also asked if the TURI study is something that might be good to pursue region-wide like was done with mercury. Model legislation could also be drafted.

Liz Harriman cautioned that their experience has taught them that we need to move beyond the chemical-by-chemical approach that we have pursued in the past. With respect to model legislation, MA's Safer Alternatives bill, when final, might serve as a model for other NEWMOA states.

Region 1 pointed out that we also want to involve purchasing staff in these discussions, in addition to P2 and RCRA staff.

Terry Goldberg again mentioned the P2 training that NEWMOA had done about ten years ago, and asked if it might be a good idea to do something like that again.

At this point the discussion concluded, and the conference call ended.