Advisory Committee on Mercury Pollution

Meeting #79: Friday, December 14, 2007
Time: 8:30 am – 12:00 pm
Location: Laundry Building, Waterbury State Office Complex
Waterbury, Vermont

MINUTES

Members Present:

John Berino, Fletcher Allen Health Care (representing Vermont Association of Hospitals and Health Systems)
William Bress, Vermont Department of Health
Gary Gulka, Vermont Agency of Natural Resources, Environmental Assistance Office
Jennifer Holiday, Chittenden Solid Waste Management District
Neil Kamman, Vermont Agency of Natural Resources, Water Quality Division
Senator Richard McCormack, Vermont State Senate
Eric Palmer, Vermont Department of Fish & Wildlife

Guests Present:

Sue Barry, Immunization Program Chief, Vermont Department of Health (via telephone)
Alison Crowley DeMag, National Electrical Manufacturers Association
Matthew Levin, Vermonters for a Clean Environment
Bridget Schoffelmeijer, National Electrical Manufacturers Association, Alliance of Automobile Manufacturers
Peter Taylor, Vermont State Dental Society

The Committee members and interested parties gathered at the Waterbury State Complex, Laundry Building. Neil Kamman called the meeting to order.

Agenda Item 1

Review draft minutes from November 27, 2007 meeting

A motion was made and seconded to approve the minutes of the November 1, 2007 as drafted. The motion passed unanimously.

Agenda Item 2

Committee member concerns as a standing committee item

No member or public concerns were raised.

Agenda Item 3

Environmental monitoring update and year in review

Neil Kamman highlighted major mercury control, monitoring, and research initiatives that are relevant to Vermont and provided the Committee with the following handout.

METALLICUS: The Mercury Experiment to Assess Loadings in Canada and the US.
This major study being carried out in the northern Experimental Lakes Area of Manitoba has been mentioned in prior Advisory Committee on Mercury Pollution (ACMP) Annual Reports. METALLICUS is a groundbreaking, multi-million dollar study where researchers from the US and Canada have experimentally dosed a small lake with known quantities of chemically distinguishable forms of mercury known as stable isotopes. The design of the study is such that researchers can understand whether mercury deposited to land, water, or wetlands is most readily available to fish. The study has allowed researchers to observe both the increase in biota mercury that would be attributable to increasing mercury deposition, and the declines in biota mercury that are expected under declining deposition rates. The authors have just reported on their groundbreaking results in the *Proceedings of the National Academy of Sciences* (PNAS). Their profound findings are as pertinent to Vermont waters as to that tiny Manitoba Lake that was experimentally dosed for the study. The most salient finding is directly quoted here from the *Proceedings* (PNAS 104:42, p.16586):

"Essentially all of the increase in fish methylmercury concentrations came from mercury deposited directly to the lake surface. In contrast, <1% of the mercury isotope deposited to the watershed was exported to the lake (…). Lake mercury isotope concentrations were still rising in lake biota, and watershed mercury isotope exports to the lake were increasing slowly. Therefore, we predict that mercury emissions reductions will yield rapid (years) reductions in fish methylmercury concentrations and will yield concomitant reductions in risk. However, a full response will be delayed by the gradual export of mercury stored in watersheds. The rate of response will vary among lakes depending on the relative surface areas of water and watershed."

Release of the Northeast Regional Mercury Total Maximum Daily Load
The New England states and New York, in collaboration with the New England Interstate Water Pollution Control Commission have completed a total maximum daily load (TMDL) analysis addressing all mercury-impaired water bodies in the region. TMDL's are pollution control plans required by the Clean Water Act that articulate maximum allowable loadings of pollutants to receiving waters from nonpoint and point sources. The Northeast Regional TMDL is novel in three respects. It is the first in the country to adopt a regional set of goals and allocations to address a regional collection of water bodies. In addition, the TMDL calls for more aggressive emission controls within the national Clean Air Mercury Rule than are presently envisioned by the current Environmental Protection Agency (EPA) administration. Finally, the plan imposes an allocation of nonpoint (e.g. atmospheric) mercury upon jurisdictions outside of the region in which the plan applies. New England Interstate Water Pollution Control Commission (NEIWPCC), the plan technical team, and EPA have had several meetings regarding the TMDL, and all indications from EPA are that

the plan will be approved in the timeframe of the release of this Report. U.S. Senator Leahy recently sent a letter to the EPA Administrator urging rapid approval of the plan.

Many other states are looking closely at the outcome of EPA's approval decision, and are considering adopting a similar TMDL approach. While this was a regional initiative, Vermont Agency of Natural Resources (ANR) staff played a very significant role in the development of this plan.

Important synthesis studies by Hubbard Brook Research Foundation

The Hubbard Brook Research Foundation's ScienceLinks team published two important journal articles that stand as statements on the overall footprint of the mercury problem in the northeast. These were described in the 2006 ACMP Annual Report, but were published after the printing of that report. The media release of these studies served to spotlight that mercury remains an environmental issue in the northeastern United States, despite the initial implementation of the federal Clean Air Mercury Rule

National Mercury Monitoring Program

Both of the Hubbard Brook journal articles speak to the need for a National Mercury Monitoring Program, to consistently track changes in mercury contamination over time, across a suite of selected locations. A bill has been drafted by US Senators Snowe and Collins (both of Maine) that would establish the program. In the past two years, northeastern Senators have been approached to dedicate funds to establish pilot National Monitoring Program studies in Vermont, New Hampshire, and Maine. At present, one earmark has been dedicated to the Hubbard Brook Research Foundation to pilot the program at the Hubbard Brook Research Forest in New Hampshire. The sponsoring Senators have recently made mention of the clear link between the need for EPA to approve the Northeast Regional TMDL and the associated need to establish the National Mercury Monitoring Program.

Wet and dry mercury deposition monitoring continues at the Underhill mercury monitoring station

In 2006, we reported on the work of Dr. Eric Miller of the Ecosystems Research Group, (Norwich, VT) who has been making wet and dry mercury deposition measurements at the Underhill monitoring station with novel and groundbreaking techniques. Dr. Miller has developed stronger evidence than ever before that certain mercury deposition events measured in Vermont can be directly attributed to mercury emissions from Midwestern areas, reinforcing the understanding that meaningful reductions in mercury emissions from coal fired power plants will result in an important reduction in mercury deposition to Vermont. This is a central tenet of the Northeast Regional Mercury TMDL, and one validated by the findings of METALLICUS.

In early 2007, Dr. Miller lost earmark-based EPA funding that had, for the prior several years, supported advanced atmospheric monitoring initiatives at Underhill. Thankfully, other EPA funding was made available to ten locations nationwide to begin the atmospheric monitoring portion of the National Mercury Monitoring Program, with the specific goal of tracking changes attributable to implementation of the Clean Air Mercury Rule. Dr. Miller

successfully competed for these funds, securing the advanced monitoring operations at Underhill for the next two years. In addition to the advanced initiative, monitoring of wet mercury deposition also continues at Underhill. This work is supported by the Lake Champlain Research Consortium (LCRC), using funding from National Oceanic and Atmospheric Administration (NOAA). The more routine monitoring supported by this latter funding stream is critical to maintain a complete understanding of mercury deposition in Vermont. At present, ACMP understands that funding provided through LCRC may not be sustainable over the long-term. The Underhill monitoring location is the longest running such station in the world.

Continuation of the Lake Champlain Modeling Project

This long-standing project is in the second of a three-year cycle, and is now being led by Dr. Miller. The project was substantially augmented during 2007. The project has been redesigned to link measurements of reactive gaseous mercury deposition (measured dry deposition) to mercury in water, then to methylmercury, and in-turn to the biota that accumulate methylmercury. In this way, the project team will be able to track deposition events of mercury from known sources into the aquatic food web in Lake Champlain. This project is a unique partnership of Dr. Miller, Dartmouth College, the Agency of Natural Resources, and the U.S. Geological Survey (USGS).

Mercury monitoring by USGS

During 2007, USGS commenced monitoring of mercury discharges from the stormwater-impaired Englesby Ravine watershed. This is an interesting study site, in that the installation of stormwater detention ponds can have simultaneous and counteracting effects on mercury bioavailability. On one hand, the detention ponds are expected to reduce total mercury delivery from Englesby Ravine to Lake Champlain. However, the pollutant-trapping ponds that are so important to hydrologic and sediment controls can themselves exacerbate the mercury problem, by creating an environment wherein mercury is readily methylated. As such, the combined effect of the Englesby stormwater project may be to reduce total mercury discharge, but increase methylmercury discharge. This important research carries implications for stormwater controls throughout the country.

In addition to this, USGS monitoring of mercury at their experimental site on the Sleepers River (Danville) continues. Dr. Jamie Shanley (USGS office in Montpelier) and others from USGS recently published an important scientific article in the journal *Water Air and Soil Pollution* describing the movement and methylation of mercury from the Sleepers River site.

Finally, during 2008 the USGS also plans to augment the Lake Champlain Modeling Project by initiating a collaboration with Dr. Mark Marvin DiPasquale, one of the nations foremost mercury scientists. Dr. Marvin DiPasquale specializes in the mechanisms by which methylmercury is produced, retained, and distributed in lake sediments.

Mercury geo-spatial assessments for the New England Region: The EPA-led MERGANSER Project

The main objective of this collaborative project is to integrate environmental models, observational databases, and a rich body of research findings from Vermont and the remainder of New England to produce a regional GIS-based tool that will enhance our understanding of mercury sources, fates, risks, and exposures throughout the region. With recently obtained EPA funding, the project team, consisting of scientists from EPA, USGS, Vermont ANR, NEIWPCC, the Northeast States for Cooperative Air Use Management, along with Drs. Miller and Evers, will develop this modeling system. This model will allow managers to identify ecosystem features (such as stream density, watershed size, amount and type of wetlands, water chemistry, mercury sources, and land-use and topological patterns that determine wet and dry deposition patterns of mercury) associated with high levels of mercury in fish and fish-eating birds (e.g., loons), and to predict mercury levels in fish and birds at lakes where no tissue data are available. In addition, the model will be useful for determining optimal locations for long-term monitoring and identifying monitoring needs for lakes that may be most susceptible to elevated mercury. The MERGANSER initiative is to commence during 2008.

Loon Recovery Project

Abandoned loon eggs and feathers from Vermont lakes continue to be analyzed for mercury in conjunction with the Loon Recovery Project, in partnership with the Biodiversity Research Institute in Maine.

Vermont Fish Contaminant Monitoring Committee

This committee oversees collection and analysis of fish contaminants throughout Vermont. In 2006, the Committee delivered a report to the General Assembly, in response to 10VSA§7114, outlining elements of a necessary indicator-based mercury monitoring initiative for Vermont. The plan has seen no action as of this writing. Despite this, the Committee continues to collect samples as time and resources permit, on an ad-hoc basis. The most newly available fish tissue samples were collected during this past summer, from inland lakes and ponds in Vermont. During 2007, the US Environmental Protection Agency provided Vermont with invaluable assistance for both field sampling and chemical mercury (and PCB) analysis. This assistance included the first-ever measurements of fish mercury from Shelburne Pond, a valued Champlain Valley lake fishery. The analysis of the 2007 fish tissues is proceeding, in partnership with EPA, as of this writing. During 2008, the Vermont Department of Fish and Wildlife will undertake a major screening of waters statewide for viral hemorrhagic septicemia. Fishes collected for this effort will also be sampled for mercury and hopefully other contaminants. It bears mention in this Report that other fish contaminants such as PCB's and poly-brominated diphenyl ethers (a chemical class of flame retardants) remain poorly characterized in Vermont.

New Fish Consumption Guidance Issued

Based on the newly obtained fish tissue mercury data from the period 2003-2005, the Vermont Department of Health (VDH) has revised the Vermont fish advisory. This advisory clarifies, improves upon, and supersedes the 2001 Advisory, which was the last advisory issued by VDH. In order to disseminate the Advisory, VDH, in partnership with

Vermont ANR and the ACMP, developed a new fish mercury poster containing the Advisory, for distribution to bait shops, grocery stores, fish markets, schools, and other outlets. Additional detail on this partnership is provided in following sections of this Report. Some of the refinements to the advisory include new guidance against the consumption of the largest yellow perch, a minor relaxation in the suggested allowable meals-per-month of certain other locally caught fish species, and minor modifications to specially-identified waters.

The paradigm is changing

While mercury has long been considered to be a problem of the aquatic world, new research in New England and elsewhere is beginning to broaden this perspective. In 2005, ACMP reported to the legislature on the discovery of high levels of mercury in the mountaintop-dwelling Bicknell's thrush. Recent investigations show that many birds are affected by mercury contamination, in landscapes where this would not be expected. For example, in the Sudbury River of Massachusetts, Dr. David Evers from the Biodiversity Research Institute (Maine) has shown that common redwing blackbirds, a species that feeds from an insectivorous food chain, can have as mercury levels as much as two-times that of kingfisher (an obligate piscivore), in habitats where these birds co-occur. Dr. Evers explains that the redwing blackbirds feed upon spiders, that themselves feed upon smaller spiders or other insects that live in the margins of wetlands. By contrast, the kingfisher feeds on small fishes within the wetland, which themselves depend on plankton. What Dr. Evers is showing is that the methylmercury that indeed is generated in the aquatic environment, can negatively impact terrestrial birds, in wetland habitats throughout the country This research further shows that the risks of mercury are pervasive across our environment, which makes the virtual elimination of mercury from Vermont that much more important.

Comments:

- Peter Taylor asked about mercury levels in Alaskan salmon as a commercial fish. Neil Kamman indicated that Alaskan salmon is wild and has very low levels of mercury. He acknowledged that Alaskan salmon was not included on Vermont's fish card. Mr. Kamman indicated that most commercial Atlantic salmon is farm raised and although mercury levels are relatively low, there have been reports of high levels of certain industrial organics like PCBs when contaminated feed pellets are used.

- Matthew Levin asked Mr. Kamman whether the mercury contamination represents a new paradigm or just an expansion of the mercury contamination problem to other realms. Mr. Kamman clarified his statement by indicating that the more that researchers look, the more they are finding mercury in non-aquatic wildlife at levels that may cause risk to these populations. He indicated that the risk implications and impacts are now moving beyond fish and fish consumption.

- Gary Gulka asked the Committee if it wished to carry forward the recommendation on a fish mercury monitoring program that was contained in the 2007 legislative report. Neil Kamman indicated that he was supportive of carrying forward this recommendation because this program would provide mercury contaminant trends over time that cannot

be determined through the current sampling that is done by the Agency. Eric Palmer stated that he continues to support the mercury sampling that is done through the Department of Environmental Conservation (DEC) lab on the routine fish samples now collected by Fish & Wildlife staff for other purposes. He indicated that there is not adequate staff or funding to do a separate fish mercury monitoring program. A decision on a Committee recommendation about a fish mercury monitoring program was deferred until later in the meeting.

Agenda Item 4

Discussion related to mercury thermostat collection

Gary Gulka provided an overview of several mercury thermostat collection pilot programs that have been recently conducted both in and outside of Vermont and mentioned that H.515 was passed out of the House last legislative session and contains financial incentives for thermostats collected by contractors and homeowners to be funded by thermostat manufacturers.

Oregon and Indiana Thermostat Collection Pilot Projects

- The Product Stewardship Institute coordinated a one-year pilot project in Indiana and Oregon during calendar year 2006 to test the effect of a financial incentive provided to heating, ventilation, and air conditioning contractors for collecting mercury thermostats and turning them in for recycling. The financial incentive was a $3 rebate in Indiana and a $4 rebate in Oregon. A rebate coupon was given to the contractor by a participating thermostat wholesale supplier for each mercury thermostat turned in. Upon purchase of an Energy Star qualified thermostat, the contractor mailed the rebate coupon to the Thermostat Recycling Corporation, the third party administrator, who then mailed a check to the contractor.
- In Oregon, there was a 124 percent increase in thermostats recycled in 2006. In Indiana the increase was only a few percentage points. A difference in the two states was a greater degree of outreach to contractors provided by the state agency.
- The PSI report concluded that financial incentives can be effective and must be long term in order to maintain the changed behavior. There was a significant decrease in thermostats recycled in the two states after the pilot program ended.
- The PSI report also concluded that there appeared to be two classes of HVAC contractors – those that will participate without an incentive because it is the right thing to do and those that need motivation, such as a financial incentive to recycle thermostats.
- The report also concluded that other forms of incentives are likely simpler, more effective, less costly, and more widely accepted than a rebate off an Energy Star thermostat.
- Finally, the report concluded that three factors appear to be important in yielding successful results: program awareness, convenient collection programs, and sufficient motivation.

Vermont Thermostat Collection Pilot Project

- Vermont DEC conducted a two-month pilot thermostat collection pilot directed at households, with 86 hardware stores serving as collection points throughout the state. A $5 cash incentive was provided as $5 off the purchase of anything in the participating store where the thermostat was returned. DEC paid for the program through its 15 Mile Falls mercury reduction fund. Thermostat Recycling Corporation (TRC) provided the collection bins and free recycling. Customers returning a thermostat completed a short form which was turned in to DEC as a record for reimbursement.
- $6500-$7000 was spent by DEC in newspaper and radio advertising. Posters advertising the program were provided to all 86 participating hardware stores as a part of the advertising strategy.
- 916 thermostats have been turned in to date with about 10 % of the stores remaining to report.
- An average of 12-13 mercury thermostats per store was collected.
- DEC attempted to establish a baseline of residential thermostat collection prior to the pilot project. A total of 192 mercury thermostat returns were reported through municipal solid waste district household hazardous waste collection programs from July 15 – September 30.
- Oregon's pilot program yielded about 1.3 thermostats per thousand residents in a one-year period. In the Vermont pilot, 1.6 thermostats per thousand residents were collected in only a two-month time period.

Neil Kamman noted that more money was spent on advertising than in paying out rebates.

Gary Gulka stated that he draws the conclusion from the pilot results that a financial incentive does make a difference in recycling rates and that outreach is important, including information in stores.

Neil Kamman asked if this could be an annual project. Gary Gulka indicated that he believed that the program would need to be ongoing with targeted outreach in the spring and fall when homeowners are thinking about repairs or modifications to their cooling and heating systems, respectively.

Bill Bress suggested coupling a thermostat recycling message with VDH fall advertising campaign on carbon monoxide dangers in the home.

Gary Gulka indicated that most plumbing and heating wholesalers have TRC bins, however, not all are visible to contractors and some wholesalers have let the program lapse. DEC has been visiting these wholesalers this fall to re-educate and remind them of the program. He also indicated that two mailings to plumbing and heating contractors have been done in the past by DEC to alert them of the thermostat recycling program and the ban on landfill disposal.

One problem noted by Mr.Gulka is that large retailers such as Home Depot refuse to participate as a collection point for mercury thermostats. Concerns have been raised by Home Depot of liability for mercury releases.

Gary Gulka indicated that DEC estimated 2000-3000 thermostats are discarded annually in a 2006 Agency report to the Legislature on thermostats.

Gary Gulka noted that H.515, as passed by the House, would require a $5 cash equivalent be paid to homeowners and contractors, to be paid for by thermostat manufacturers who must also submit collection plans for approval. Retailers and wholesalers that sell thermostats would be required to display program advertising. The Agency would be responsible for outreach and oversight of the program and performance goals for collection rates. The consequences for not reaching target collection rates are a requirement to revise the collection plan. If goals are not met or a collection plan is not submitted or implemented, a ban on the sale of any thermostat in the state would take effect.

Jen Holiday indicated that she liked the idea of performance standards for collection and that the solid waste districts would not have to create and fund a thermostat collection program.

Gary Gulka indicated that the Agency supported H.515 as passed.

Senator McCormack indicated that there was a desire by Senator Lyons to take up the bill in the Senate Natural Resources Committee.

Gary Gulka indicated that some contractors in Maine and elsewhere have suggested giving the cash incentive for turning in a mercury thermostat directly to the technician and not to the company due to paperwork requirements.

Allison Crowley DeMag, a lobbyist representing the National Electrical Manufacturers Association (NEMA), said that thermostat manufacturers do not support performance rates for thermostat collection and the financial incentive. She indicated that collection rates are arbitrary since no one knows how many mercury thermostats are in circulation. Ms. DeMag said that she believed most Vermonters want to do the right thing regardless of the financial incentive. She also indicated that she is not convinced that the financial incentive is the only reason recycling rates increased in Vermont – program outreach was a key factor. Ms. DeMag said that NEMA's position is that there needs to be a stakeholder process as in Maine before establishing a thermostat collection program and that contractors should be involved. She indicated that NEMA is willing to work together on an alternative to H.515.

Jen Holiday said that she believed that contractors would not oppose this bill, as there is no burden to comply and collect the incentive, provided that the thermostats are not disposed as solid waste.

A motion was made and seconded to reiterate the recommendation in last year's legislative report on supporting financial incentives for mercury thermostat collection for both contractors and homeowners.

Agenda Item 5

Discussion related to mercury auto switch collection at salvage yards

Gary Gulka described Vermont's mercury auto switch collection program for auto salvage yards/dismantlers that went into effect on January 1, 2007, requiring removal of mercury convenience light switches and anti-lock brake switches prior to crushing. At the time of Vermont's program, according to Mr. Gulka, the auto manufacturers agreed to fund a $1 financial incentive for each mercury switch turned in by auto salvage yards to a third party, End of Life Vehicle Solutions. Collection buckets, labels, and free shipping are provided through this program.

DEC hired a contractor (DSM Environmental Services) to provide outreach to salvage yards about the new program, including on-site training for switch removal and collection. Follow up contact to monitor salvage yard participation in the program was also conducted.

The contract also provided DEC with better information on the existing auto salvage yards in the state.

A total of 65 auto salvage yards are participating in the program, and 129 facilities were originally contacted by the contractor. There were 99 visits to 80 establishments during the project.

As of September, most salvage yards had not filled their collection buckets with switches. Only three salvage yards had returned full buckets. A letter was sent to all participating facilities in October requesting that buckets be returned, even if not full, in order to obtain current switch collection numbers. The number of switches collected will be determined by End of Life Vehicle Solutions and reported to DEC in an annual report due December 15th each year.

The following were findings by the contractor:

- Personal contact with the facility by phone and in person was a good approach to gain acceptability to the program
- Most operations visited were cognizant of the program and agreed to participate
- The majority of salvage yards did not join the program because of the $1 incentive, but because of the legal requirement and the convenience of recycling through the collection bucket and free shipping provided.
- A common complaint heard by the contractor was the large number of unlicensed operations and vehicles taken directly out of state

Gary Gulka stated that his assessment of the program to date is that the vast majority of the facilities that should be in the program are participating and that significant effort has been invested into setting up the facilities for switch collection. More time is needed to fully

assess the program and the need for any changes to increase switch collection and at the present time, DEC is not interested in revisiting the amount of the financial incentive.

John Berino asked how the program will be monitored and whether the DEC has the resources. Gary Gulka indicated that there will be ongoing monitoring as resources allow. Mr. Gulka indicated that if and when DEC establishes a salvage yard regulatory program, the mercury auto switch program would become a small part of this program and oversight would occur through this mechanism.

The consensus of the Committee was that DEC should report back on program status as part of the work plan of the Committee.

Alison Crowley DeMag indicated that the mercury auto switch program was another example that a financial incentive or bounty is not needed in order to get adequate participation.

Agenda Item 6

Discussion on mercury-containing lamps

Jen Holiday, Karen Knaebel, and Michael Bender met as a subcommittee to bring recommendations back to the full Advisory Committee.

Jen Holiday described a national conference call on mercury-containing lamps that was organized by Michael Bender. The purpose of the call was to share information from states and organizations related to lamp collection, recycling, manufacturing methods, and product stewardship efforts. On the call, there was discussion of mercury releases from the manufacturing process and significant mercury releases that can occur, depending on the way in which mercury dosing of the lamps occurs.

The Subcommittee felt that the State of Vermont should have purchasing and procurement requirements for lamps that reflect the Sierra Club's recommendations which include:

- Manufacturer involvement in collection of spent lamps
- Disclosure of the manufacturing facility location
- Disclosure on mercury content
- Identification of mercury dosing method
- Energy efficiency standards

The Subcommittee also recommends that the Committee work plan include discussions with Efficiency Vermont on the types of bulbs that are being acquired through various contracts to ensure that they are the most protective of the environment.

The Subcommittee also recommends that the Agency work toward producer responsibility for take-back of spent lamps and that ANR participate in the national stakeholder dialogue on producer responsibility for lamps.

The Subcommittee also recommends that ANR should continue its work with retailers as part of the collection and take-back of spent lamps since Vermont is a leader in this area.

It was agreed by consensus that Jen Holiday would work with the Subcommittee to refine recommendations and provide a statement of rationale on lamps that could be considered by the full Committee for inclusion in the legislative report.

Agenda Item 7

Status of broken bulb and spill cleanup guidance

Gary Gulka provided the Committee with an update on the work to finalize lamp breakage and mercury spill cleanup guidance and shared the latest drafts of the documents.

A regional conference call to continue discussions on cleanup procedures for broken lamps was canceled due to the snowstorm and rescheduled for December 20.

Neil Kamman suggested that the bulb fact sheet include a statement that bulbs contain a small amount of mercury in the gaseous state which will dissipate over time.

Question about the spill fact sheet and statement about not using a washing machine for contaminated clothes. Perhaps more guidance should be given on what to do with soiled clothes, such as ventilate/aerate them or discard them.

On the spill fact sheet, consider clarifying what a small amount of mercury really is – such as a half a teaspoon.

Does the Haz Mat team really want to be contacted in case of a spill? Gary Gulka indicated that they would be reviewing the fact sheet.

Agenda Item 8

Discussion of Thimerosal

Neil Kamman recapped the discussion at the last meeting and the proposal for a three-part recommendation that includes:

1. Ban on thimerosal vaccines for children under 18 and pregnant women
2. Guidance from the Vermont Dept. of Health on how to obtain a thimerosal-free vaccine
3. Phase out over time of all thimerosal use in vaccines

John Berino indicated that Fletcher Allen purchased 17,900 doses of flu vaccine and10,000 of these were thimerosal-free. The preservative-free vaccines were administered to employees, inpatients and outpatients.

Sue Barry, Immunization Program Chief, joined the Committee by phone.

She indicated that the VDH buys vaccines for 0-18 years of age for various distributors and are now also getting some vaccines for adults

Bill Bress posed the question to Sue Barry about Vermont becoming a dumping ground for thimerosal-containing vaccine if and when more states ban the use of thimerosal. She said that she did not believe this would happen.

Ms. Barry said that California could not get all of the thimerosal-free vaccine it needed and that it came much later than expected, causing a delay in vaccinations.

Vermont was able to purchase 5,140 doses of thimerosal-free vaccine this year – only a quarter of what was needed. For over age three, only 900 thimerosal-free doses were obtained. Production is limited. It is not appropriate to use the flu vaccine allotted for age 18 and over for younger children.

Sue Barry indicated that she did not believe that Vermont would be a dumping ground because VDH buys vaccine off CDC contract and the amount of thimerosal-free doses provided by CDC appears to be population-based, not any preference shown for states that ban thimerosal use.

Question as to why CDC cannot supply all thimerosal-free vaccine. Sue Barry indicated that CDC only gets a certain amount though a wholesale pricing contract – they negotiate a contract with manufacturers. The rest is sold on open market at higher price. It is not likely that Vermont could get more through CDC.

In the age group six months to age three, Vermont needed 18,000 doses, but only got 6000 doses of thimerosal-free vaccine. The remainder, which was the majority of what was distributed, contained thimerosal.

Pediatrician's offices buy both from CDC and the open market – mostly multi-dose.

According to Ms. Barry, the supply of thimerosal-free vaccine is not yet adequate. VDH would need another source of funding to buy thimerosal-free vaccine from some other source. The vaccine that VDH provides to heath care professionals is at no cost.

Sue Barry indicated that flu mist nasal spray is thimerosal-free and can be used down to age two. However, it has not been well received by the public and it cost more - $17 versus $9 per dose.

Ms. Barry stated that pediatric DT vaccine still contains thimerosal. If a parent refuses pertussis (whooping cough), they will not have a thimerosal-free choice for diphtheria or tetanus. Adult DT vaccine still has thimerosal.

A motion was made and seconded to support the three-part recommendation with a reiteration of last year's recommendation regarding lack of availability of thimerosal-free vaccine.

Agenda Item 9

Discussion of herbal supplements containing mercury

Bill Bress presented additional information to the Committee on mercury content of Chinese and Indian herbal supplements and homeopathic medicines

Average mercury content of herbal supplements from these sources was 20,000 micrograms per gram. Arsenic and lead are also found in high concentrations.

Homeopathic medicines averaged 0.5 to 100 micrograms per gram.

Question as to whether these products are sold anywhere in Vermont and whether there are associations that represent homeopaths and naturopaths. Some of these groups are represented and could be a way to get information out about these products with mercury and other heavy metals.

It was agreed by the Committee that this issue would be placed on the work plan for next year.

Bill Bress was urged to continue to communicate with the Attorney General's Office on their testing of these products and the possibility of including mercury testing.

The red dye in tattoo ink contains mercury according to Dr. Bress.

Agenda Item 10

Discussion of legislative report

Gary Gulka indicated that he would attempt to draft the legislative report and send to Committee members before the first of the year. He asked that the lamp subcommittee provide the language for the recommendation on mercury lamps as well as the rationale.

Agenda Item 11

Set date and agenda for next meeting

A Committee meeting will be scheduled for the week of January 7 to approve the legislative report. Committee members were urged to send comments via email and/or attend the meeting on the week of January 7 in person or by phone. The meeting will be scheduled for two hours.