

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

October 21, 2004

TO: Steven E. Chester, Director

FROM: Shannon Briggs, Chairperson, Toxics Steering Group
Surface Water Assessment Section
Water Bureau

SUBJECT: Toxics Steering Group Meeting Minutes

Attached for your review are the September 20, 2004, Toxics Steering Group meeting minutes.

If you have any questions regarding the minutes, please contact me.

sb:dp

Attachment

cc/att: Dan Wyant, Director, Michigan Department of Agriculture
Janet Olszewski, Director, Michigan Department of Community Health
Stanley F. Pruss, Deputy Director, MDEQ
JoAnn Merrick, Senior Executive Assistant to the Director, MDEQ
Keith Harrison, Office of Special Projects, MDEQ
Richard A. Powers, WB, MDEQ
Diana Klemans, WB, MDEQ
George W. Bruchmann, WHMD, MDEQ
G. Vinson Hellwig, AQD, MDEQ
Amy A. Butler, ESSD, MDEQ
Harold R. Fitch, GLMD, MDEQ
Andrew W. Hogarth, RRD, MDEQ
TSG

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
TOXIC STEERING GROUP MEETING MINUTES
September 20, 2004**

Members:

Shannon Briggs, MDEQ/WB
Christina Rose Bush, MDCH
Dennis Bush, MDEQ/WB
Gary Butterfield, MDEQ/AQD
Michael Depa, MDEQ/AQD
Christine Flaga, MDEQ/RRD
Linda Dykema, MDCH (not present)
Brian Hughes, MDA/PPMD
Mary Lee Hultin, MDEQ/AQD
Rochelle Inglis, MDEQ/RRD
Erik Janus, MDCH

Anne Kim, MDEQ/AQD
Deborah MacKenzie-Taylor, MDEQ/WHMD
Amy Merricle, MDEQ/WHMD
Aphrodite Nikolovski, MDEQ/RRD
Amy Perbeck, MDEQ/WB
Margaret Sadoff, MDEQ/AQD
Robert Sills MDEQ/AQD
Catherine Simon, MDEQ/AQD
David Wade, MDCH
Bob Wahl, MDA

Also in Attendance:

Keith Harrison, MDEQ/OSP
Emily Weingartz, MDEQ/WB
Robin Rosenbaum, MDA

1. Catherine Simon introduced Anne Kim who was recently hired as a Toxicologist for the Air Quality Division (AQD).
2. According to Dennis Bush, Water Bureau (WB) and Robin Rosenbaum, Pesticide Registration Program Manager, Michigan Department of Agriculture (MDA) there are occasions when the MDA needs the Michigan Department of Environmental Quality's (MDEQ's) input on special pesticide use requests (Section 18 and Section 24c requests) because of potential environmental concerns. However, there is currently no formal mechanism in place for the MDA to request input from other Departments on these reviews. This issue has recently arisen because Brian Hughes, Toxicologist, MDA requested that Dennis Bush review the pesticide, clopyralid, because of concerns related to leaching to groundwater. A 1986 Memorandum of Agreement (MOA) was established between the MDA, Michigan Department of Natural Resources (MDNR), and the Michigan Department of Community Health (MDCH) but it is not written in a way that provides the MDA a mechanism for seeking assistance. Instead, the MOA requires the various Departments to "send a list of chemicals and/or formulations and the types of uses it desires to review" to the MDA. The question was asked whether the current MOA should be modified to provide a formal mechanism for the MDA to request assistance from other Departments. Little interest in modifying the MOA was expressed at the meeting but it was agreed that the current MOA has little value. Keith Harrison, Office of Special Projects (OSP) discussed the results of the meeting with Jim Sygo, Executive Division and Jim thought it might be useful to modify the MOA. A workgroup may be created in the future to further look into this issue.
3. Bob Wahl, MDA gave a presentation on how he responds to concerns regarding perceived cancer clusters.
4. Director Steven E. Chester, MDEQ requested that all MDEQ policies be reviewed. The Toxic Steering Group (TSG) policy was reviewed on December 12, 2003, and the TSG decided no further revisions were required at this time. A copy of the TSG policy is at http://deqinet/policy/departmentwide/dept_docs/ToxicsSteeringGroup.doc.
5. Maggie Sadoff, AQD noticed that the TSG Web site needs to be updated. Mary Lee Hultin, AQD also mentioned that some of the subcommittee reports posted on the Web site need to

be updated. Maggie will add a description and a list of members for each subcommittee to the Web site. Please submit any work product from your subcommittee or anything else of interest for the Web site directly to Maggie.

6. Chris Flaga, Remediation and Redevelopment Division (RRD) and Amy Merricle (RRD) summarized highlights and technical information that were presented at the Mid-Western States Risk Assessment Symposium (MSRAS). Amy provided a summary of the technical and toxicological information on Trichloroethylene (TCE) that was presented at the Symposium. Amy also provided a summary of the status of the TCE subcommittee.
 - a. The 2nd MSRAS was held in Indianapolis, Indiana on August 25-27, 2004. The sessions included Indoor Air Vapor Intrusion, Background Metals and Polyaromatic Hydrocarbons (PAHs), and Characterization at Brownfield Sites. An update of the Environmental Protection Agency (EPA) Vapor Intrusion Guidance was provided by Henry Schuver, EPA and a panel discussion was held on the toxicity of TCE. Several specific sites across the country were discussed confirming the significance and frequency of vapor intrusion impacts resulting from contamination sites. The impacts of background sources (building materials, household/garage products, occupant activities, outdoor air) were discussed along with the importance of controlling these sources prior to indoor air sampling. Indoor air sampling is only recommended when the contribution from other sources is minimized or eliminated, when seasonal variation is accounted for, and when other sampling is performed concurrently (i.e., ambient air and soil gas).
 - b. Henry Schuver alluded to a potential paradigm shift in the way the vapor intrusion pathway is assessed. Comparing the current use of the Johnson and Ettinger (J&E) model to the boom in modeling groundwater in the late 1980s and early 1990s, he speculated that, like the use of groundwater models today, conclusions generated using complex vapor intrusion models like the J&E model will be replaced by the collection and interpretation of actual field data (subsurface soil gas, ambient air, indoor air, etc.). Henry Schuver was quoted, stating "a perfect model gives you anything you want..." In general, current data trends suggest that the J&E model is over-predicting attenuation and indoor air concentrations, depending on the contaminant.
 - c. A TCE Panel Discussion was moderated by Michael Dourson, Toxicology Excellence for Risk Assessment (TERA).

TCE Panelist Members:

- Dr. Jeri Higginbotham, Commonwealth of Kentucky
- Paul Dugard, Halogenated Solvents Industrial Alliance
- Dr. Robert Howd, Office of Environmental Health Hazard Assessment, California EPA
- Dr. Lorenz Rhomberg, Gradient Corporation
- Dr. Carl H. Stineman, Ecology and Environment, Inc.
- Dr. Jeffrey Mendel, Exponent

The TERA conducted a TCE state survey prior to the conference. Fifteen states participated in the survey, including Michigan. The introduction to the TCE toxicity panel discussion summarized the range of cancer slope factors being used for TCE across the country. The most common slope factor reported by participating states to address drinking water exposure was the 4E-01 per mg/kg-d value presented in the EPA's 2001

Health Risk Assessment (HRA) document. However, a 30-fold difference in slope factors was exhibited. The most common inhalation slope factor reported by the participating states was also 4E-01 per mg/m³, although a 70-fold difference was exhibited. Most states were also using the same toxicity values for residential and industrial (13/15 states).

The contract with the National Academy of Sciences (NAS) to review the HRA for TCE is undergoing final review and should be finalized shortly. The review is expected to take at least two to four years.

Panelists discussed the controversial and apparently conflicting evidence for the low level toxicity of TCE. Discussions covered a wide range of highly technical topics and included some summary policy topics. Although a final recommendation for selecting an appropriate point estimate from a range of toxicity values was not provided by the panelists (neither a technical recommendation nor policy), conference participants stressed the need to balance the evidence for harm with 1) the frequency of the exposures that are occurring, 2) the cost of implementing an 'acceptable risk level', 3) the need to 'rationally' prioritize the available resources, both for responsible parties and regulators, and 4) to remain accountable and reliable (particularly EPA?). The panelist countered these arguments, stressing the importance of differentiating and segregating risk assessment from risk management. Risk management considerations buried in the primary and fundamental aspects of risk assessment (specifically the toxicity factor) would be the least observable place and potentially imply the application of such factors for all land uses, pathways, and receptors, which may not be appropriate depending on the specific risk management considerations (e.g., cost, exposure frequency, etc.).

The panelists also debated "biologically relevant" versus "relevant for risk assessment" in regard to observations from human studies, particularly those studies in which multiple chemical exposures are known to occur. Some panelists were quick to discount such studies as inappropriate for quantifying risk; however, other panelists expressed concern for ignoring significant observations of health impacts from such studies and believed that it is important to recognize such observations as "biologically relevant." Again, quantification for risk assessment and selecting an appropriate point estimate from such studies is the subject of much debate.

Further details on the information presented at this symposium can be obtained from Amy or Chris.

7. Subcommittee chairpersons provided updates for each of the following:
 - Polybrominated diphenyl ethers (PBDEs) – Update provided by Chris Flaga. A presentation of the PBDE white paper was made by this subcommittee to the PBDE stakeholders group on June 28, 2004. The subcommittee is in the process of updating the scientific literature review such that the report can be updated and finalized by the end of the year. All information will be updated but a special focus will be on the Deca-PBDE commercial mixtures since previous information was most limited for this group.
 - Dioxin – Update provided by Deb MacKenzie-Taylor.

Dioxin Subcommittee: TERA has been contracted to coordinate an independent review of the proposed pilot bioavailability study protocol submitted by Dow. TERA has three reviewers who have agreed to review the protocol. TERA is seeking a fourth reviewer and drafting a charge to the reviewers. It has been reported that Dow is proceeding with the pilot study at their own risk without MDEQ review and approval of a workplan.

MDEQ staff met with University of Michigan (U of M) researchers who are conducting a dioxin exposure study. Although the U of M exposure study will look at some populations likely to be exposed to dioxin soil contamination, the MDEQ expressed concern that the study is not designed to address all critical exposure pathways and separately represent population(s) exposed to contamination through these critical pathways. These concerns are related to the study not providing information that could be used for developing site-specific cleanup criteria. Some recommendations were provided for the U of M researchers consideration. The MDEQ hopes to follow up when any changes are made to the proposed study design.

- Lead – Update provided by Rochelle Inglis. No new activity to report.
- Children's Health – Update provided by Mary Lee Hultin. The subcommittee participated in the Minnesota Groundwater Rule Revision Stakeholders meeting in July and is working on a summary report of findings to date.
- Trichloroethylene – Update provided by Amy Merricle. The criteria will remain unchanged Department-wide at this time. The EPA has submitted its draft HRA for TCE (2001) to the NAS for review. It will likely take up to 15 months at NAS. Because peer review process will have expired at the end of that time (statute of limitations), the HRA will have to go through another peer review process. It will likely be 2007 or 2008 before the public will see any final value published in the Integrated Risk Information System (IRIS). For more information, see the summary of the TCE panel discussion from MSRAS, above.
- Methamphetamine Labs – Update provided by Erik Janus, MDCH. The subcommittee unofficially met for the first time within the last two months. This meeting consisted of Erik and Aphrodite Nikolovski, RRD discussing the aspects of the new state legislation governing remediation of illegal drug labs, as well as the task that the subcommittee has before it to satisfy the requirements of the new legislation. As such, the subcommittee is investigating establishing the first national methamphetamine lab remediation standard based fully on health effects in children and not based on analytical limit of detection. Research into dose response is ongoing to determine a no-effects/low-effects level in order to establish a standard protective of children's health.
- Uncertainty Factors – Update provided by Bob Sills, AQD. No new activity to report. Those interested may want to review the August 2004, revised EPA reference dose for boron in IRIS. Note the method used to establish a non-default uncertainty factor for intraspecies variability.
- Mixtures – Update provided by Bob Sills. No new activity to report.
- Cancer Risk – Update provided by Catherine Simon. No new activity to report.

8. Maggie announced the availability of a Risk Communication/Public Involvement workshop that is offered through the EPA. The costs for a workshop include airfare and hotel accommodations for EPA staff. Maggie is investigating the possibility of having this workshop for the TSG and other interested staff.
9. Shannon Briggs, WB asked subcommittee chairpersons to begin working on individual summaries for the Annual Report to the Director that is due November 1, 2004.
10. Shannon Briggs asked that Groupwise calendars be kept up-to-date for the next TSG meeting that will be scheduled in the morning sometime between December 6 and December 17, 2004.