

MICHIGAN DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT

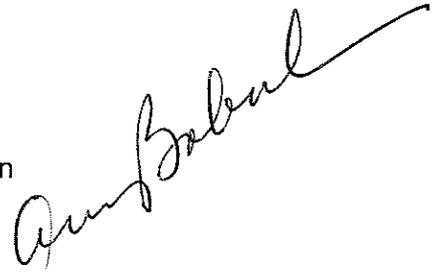
INTEROFFICE COMMUNICATION

TO: Dan Wyant, Director
Jim Sygo, Deputy Director, Environmental Protection

FROM: Amy Babcock, Chair, Water Resources Division

DATE: February 23, 2011

SUBJECT: Toxics Steering Group (TSG) – 2010 Annual Report



Please find attached the 2010 Annual Report prepared by the TSG. This fulfills the requirement of the Department of Natural Resources and Environment (DNRE) Policy and Procedure Number 09-006 for the TSG to prepare an annual report of accomplishments and recommendations to ensure adequate protection of children's health.

The purpose of the TSG is to provide a forum for discussion of human health risk assessment issues related to exposure to chemical contaminants in environmental media. The TSG facilitates development of consensus recommendations based on sound science to relevant state department managers, fosters consistency of risk assessment applications within the DNRE and between state agencies, and ensures that duplication of effort on risk assessment efforts is minimized.

The 2010 annual report will be available on the TSG Web site.

Attachment
cc: TSG Members



**Michigan Department of Natural Resources and Environment
Toxics Steering Group
2010 Annual Report**

I. INTRODUCTION

The Toxics Steering Group (TSG) provides a forum for the discussion of issues related to the assessment of human health risks associated with exposures to contaminants in the environment. The TSG also facilitates the development of scientifically defensible recommendations to relevant State of Michigan (State) department managers, fosters consistency of risk assessment methodologies within the Department of Natural Resources and Environment (DNRE) and between State agencies, and helps to minimize the duplication of effort. TSG subcommittees are formed when particularly complex risk assessment issues need to be resolved. All toxicologists within the DNRE, Michigan Department of Community Health (MDCH), and Michigan Department of Agriculture (MDA) are TSG members. This report describes the activities of subcommittees and individual members that have furthered the goals of the TSG.

2010 MEMBERSHIP:

DNRE:

Amy Babcock, Chair, Water Resources Division (WRD)
Shannon Briggs, WRD
Dennis Bush, WRD
Gary Butterfield, Air Quality Division (AQD)
Mike Depa, AQD
Christine Flaga, Remediation Division (RD)
Kay Fritz, Environmental Resource Management Division (ERMD)
Mary Lee Hultin, AQD
Doreen Lehner, AQD
Deb Mackenzie-Taylor, ERMD
Divinia Ries, RD
Amy Salisbury, RD
Robert Sills, AQD
Emily Weingartz, Librarian, WRD
Eric Wildfang, RD

MDCH:

Christina Bush
Linda Dykema
Jennifer Gray
Kory Groetsch
Lisa Quiggle

MDA:

John Buchweitz

II. SUMMARY OF SUBCOMMITTEE ACTIVITIES IN 2010

The only TSG subcommittee active during 2010 was the Children's Environmental Health Subcommittee (CEHS).

CEHS:

Chairperson: Mary Lee Hultin, AQD

Members: Amy Babcock, WRD
Christina Bush, MDCH
Mike Depa, AQD
Divinia Ries, RD
Amy Salisbury, RD

The CEHS is charged with tracking developments in the area of children's environmental health and making recommendations to the TSG for incorporation into human health risk assessment procedures, as appropriate.

A. Greater Grand Rapids Children's Environmental Health Initiative (GGRCEHI)



Staff from the CEHS continued to participate in the GGRCEHI, which includes numerous partners such as neighborhood, local, county, state, tribal, and federal agencies and private organizations. Details about the GGRCEHI are available at www.healthykidsgr.org. As part of the GGRCEHI, the CEHS and staff from the AQD and Office of Pollution Prevention and Compliance Assistance provided outreach and education materials to help reduce children's exposure to toxic substances. Included in this effort was a meeting dedicated to providing information about the potential to reduce children's exposure to diesel exhaust and helping to organize participation of partners in the Diesel Emission Reduction Act request for proposals process.

B. Part 201 Redesign

The CEHS continued to meet and discuss the RD's redesign and child-specific risk considerations. RD staff has prepared draft proposals for addressing developmental toxicants, including exposure assumptions used in the developmental algorithm and the potential use of age-adjusted exposure factors. The group investigated reproductive or developmental endpoints considered when various DNRE Divisions derive health-based criteria.

The group continues to track the use of Age-Dependent Adjustment Factors (ADAFs) for risk assessments of carcinogens that have a mutagenic mode of action. In 2010, the United States Environmental Protection Agency (USEPA) added two risk assessments that recommend the use of ADAFs to its Integrated Risk Information System (IRIS), namely the assessments for acrylamide and chloropropene. This brings the total number of IRIS assessments that include ADAFs to three (1,2,3-trichloropropane is the other); the CEHS will determine under what circumstances the Department should employ the application of ADAFs.

C. Collaboration with USEPA Office of Children's Health and Environmental Education

In March, the CEHS members participated in a conference call including national and regional USEPA Children's Health staff. On the call was the USEPA Director of the Office of Children's Health, Peter Grevatt. USEPA staff made clear that Children's Environmental Health is a priority of USEPA Administrator, Lisa Jackson, and the USEPA hopes to enhance collaborations among federal and state agencies.

D. Outreach and Education

- 1) Ms. Hultin gave a presentation to staff from various states and USEPA's Region V about the issues facing implementation of USEPA's *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*.
- 2) Ms. Hultin authored an article on reducing exposure to ozone for the Asthma Initiative of Michigan.
- 3) The CEHS and other TSG members coordinated with state and local health department staff to provide information and education for the citizens of Belding when that community was found to be in violation of the National Ambient Air Quality Standard for lead.

E. New CEHS Chairperson

Deb Mackenzie-Taylor replaces Mary Lee Hultin, who retired from state service at the end of 2010, as chairperson.

III. ACTIVITIES AND ACCOMPLISHMENTS

While not an exhaustive list, below are some highlights of the TSG members' efforts in 2010.

Enbridge Oil Spill

Ms. Babcock, Dr. Buchweitz, Mr. Depa, Dr. Dykema, Ms. Flaga, Dr. Gray, Mr. Groetsch, Ms. Hultin, Mr. Sills, and Ms. Quiggle were/are involved with various aspects of the response to the release that occurred on July 26, 2010.

Lansing Dietetic Association

Ms. Babcock, Dr. Fritz, and Mr. Groetsch gave presentations regarding environmental contamination of food and drinking water (e.g., mercury in fish, arsenic in drinking water) during the April meeting of the Lansing Dietetic Association.

Part 201 Cleanup Criteria for Pharmaceuticals

Dr. Fritz, with input from several TSG members, completed the final interim draft of the toxicological assessment and draft Part 201 cleanup criteria for phenytoin, an anticonvulsant medication. The draft criteria were posted on the DNRE Internet site for public comment. These are the first Part 201 cleanup criteria developed for a man-made pharmaceutical used for long-term use in humans. A briefing paper concerning phenytoin and the potential need for criteria for other pharmaceuticals was authored by Dr. Fritz for Deputy Director Sygo to discuss with the USEPA.

Saginaw Bay Coastal Initiative Speaker Series

In March, April, and May, Ms. Babcock provided toxicology lectures to kick-off the 2010 series. "Toxicology 101, 102, and 103" were presented to community members and other DNRE staff at

the Bay City Recreation Area. The talks focused on toxics and the environment, toxics and health, and toxics and regulation, respectively.

TSG Participation in Earth Day activities

The TSG once again sponsored Earth Day activities in Constitution Hall. The theme for the 2010 TSG Room was "Dust Off Your Waders, Let's Go Fishing!" and sought to raise children's awareness of the issues of mercury contamination in fish, lead poisoning in the home, and general environmental stewardship. The featured displays, staffed by 29 volunteers from MDA, MDCH, and DNRE, included "The Fishing Hole," "Build-a-Trout," "Dusty the Dog," and "Clean World Coloring Table." The DNRE, Fisheries Division, shared their fish mounts for the event and offered fishing license holders to attendees.

IV. TRAINING

Brown Bag Seminar Series

The TSG Brown Bag seminar series provides an informal, open forum for TSG members (and others) to review and discuss new and innovative issues and advances in the science of toxicology, risk assessment, and other relevant environmental themes. These discussions have allowed a more detailed level of discussion than time constraints permit during the formal TSG meetings. The Brown Bag seminar organizers, Ms. Babcock and Dr. Wildfang, continue to seek out relevant topics and speakers proposed by TSG members. Topics discussed during the 2010 Brown Bag seminar series included the following:

TSG Presenter	Topic
Amy Salisbury	USEPA OIG Report on Vapor Intrusion
Kay Fritz	DNRE Earth Day activity planning
Amy Babcock	USEPA Toxicological Review of Inorganic Arsenic
Eric Wildfang	CalEPA Lead Benchmark
Divinia Ries	Age-Dependent Adjustment Factors
Linda Dykema	Enbridge Oil Spill Response

Society of Toxicology (SOT) Webinars

Presented by the Risk Assessment Specialty Section of the SOT, these webinars afford TSG members an avenue by which to stay informed of some of the newest, most relevant issues in toxicology and risk assessment. Topics in 2010 included:

- Use of genomic dose-response information in the evaluation of carcinogenic modes-of-action (MOA).
- Developments in analyzing human relevance of various MOA.
- Biomarkers for clinical diseases.
- "Data requirements" vs. "knowledge requirements."
- Physiologically-based pharmacokinetic modeling as a means to reduce uncertainty in risk assessment.

In addition, the TSG was represented at the fall meeting of the Michigan SOT entitled, "The Developmental Origins of Disease: Emerging Mechanistic Knowledge."

Other Training

TSG members also benefitted from training and other continuing education, primarily in the form of Web-based seminars, offered by the Agency for Toxic Substances and Disease Registry, Michigan State University, National Institute of Environmental Health Sciences, Ohio Valley SOT, USEPA, and State's University Research Corridor.

V. FUTURE NEEDS AND RECOMMENDATIONS OF THE TSG

As time and resources allow, the TSG requests that Policy and Procedure 09-006 (Toxics Steering Group) be updated to reflect the modification that was submitted on January 29, 2009.

The TSG recommends pursuing increased expertise in the following areas of risk assessment:

- Cumulative risk assessment.
- Multipathway risk assessment.
- Assessment of adverse and disproportionate impacts as components of environmental justice.
- Dose-response modeling using USEPA's benchmark dose software.
- Physiologically-based pharmacokinetic modeling.
- Interpretation of health statistics and health disparities relative to environmental exposures.
- Characterization of risk at exposure levels exceeding health protective benchmarks.
- Probabilistic risk assessment.

Webinars and other free Internet-based resources allow TSG members limited opportunity for novel information exchange with the scientific community. The professional and technical development of the State's toxicologists are hindered by the inability of TSG members to participate in external conferences, workshops, and seminars, largely due to departmental budget constraints, reduced staffing, and competing assigned priorities. To achieve adequate protection of children's health, the TSG will continue to promote and pursue all forms of professional development, information dissemination, and the application of the best available science and practices in human health risk assessment and risk communication.